MANKIND

OFFICIAL JOURNAL OF THE ANTHROPOLOGICAL SOCIETIES OF AUSTRALIA

Vol. 4. No. 5. SEPTEMBER, 1950 Price : 3s. 6d.

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Published by
THE ANTHROPOLOGICAL SOCIETY OF NEW SOUTH WALES.
C.o. Australian Museum, College St., Sydney.

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OFFICIAL JOURNAL OF THE ANTHROPOLOGICAL SOCIETIES OF AUSTRALIA

Vol. IV, No. 5 **September, 1950**

ORIGINAL ARTICLES

Archæology. **Childe**

Social Evolution in the Light of Archæology.* *By Professor V. Gordon Childe, D.Litt., D.Sc., F.R.A.I., Director of the Institute of Archæology, London.*

To reduce to order the medley of data collected by ethnography during the last century anthropologists have formulated unifying hypotheses that assume the operation in the past of historical processes. The observations to be reduced to order have been made on illiterate societies. Hence the historical events and processes assumed cannot be documented by contemporary written evidence; they are inferred by comparative methods. The oldest theory using this sort of inference is that of social or cultural evolution outlined already by Herbert Spencer and formulated most explicitly by Tylor in Britain and Lewis H. Morgan in America. It assumes that all existing forms of society and culture have evolved on parallel lines from older and simpler forms and that the major disparities observed to-day are due primarily to differences in the rate of evolution. Accordingly all contemporary societies can be classified in an hierarchic order according to the stage in the unilineal evolutionary series each has now reached. If legitimate, may I remark, such a classification might provide useful rules for action, as I believe a scientific classification or law should. I mean to say, on the theory, as soon as the position of any society in the series were determined by readily observable criteria, we should know that other less conspicuous characters were also to be expected. If, for instance, we knew the outlines of the economic structure or technology of a tribe, we could deduce what sort of political structure was appropriate.

During the present century this Evolutionist theory has been opposed by so-called Diffusionist theories. The most familiar and also the most drastic of these is associated with the name of the late Sir Grafton Elliot Smith. It assumes that the essential elements of culture—both the basic inventions and discoveries used in practical life and also fundamental institutions, beliefs and myths—were invented, discovered or created only once by some single historical society. Thence they were successively diffused throughout the world by historical events but became degraded in the process. Elliot Smith himself and his disciples attributed to the ancient Egyptians the rôle of exclusive creators of the foundations of all progressive culture. Their successors, like Lord Raglan, to-day are more cautious; they refuse to define the cradle of civilization or to name the initial creators. But all accept in effect Niebuhr's dictum: " No single instance can be cited of a really savage people having

* This paper was read before Section F of the biennial meeting of A.N.Z.A.A.S. held at Hobart in January, 1949.

independently become civilized"; this has been more brutally paraphrased in the words "No savage ever invented anything." In effect, therefore, Diffusionism is liable to involve a reversion to supernaturalism; civilization becomes a miracle, if no people could civilize itself. The same is true of another theory usually classified as diffusionist—I mean the theory of Culture Cycles—the Kulturkreislehre of the self-styled Culture-historical school.[1] Founded effectively by Graebner, Schmidt and Koppers, it is now widely held by Catholic missionaries but not very familiar in English-speaking countries. Though classed as Diffusionist, it actually contains an Evolutionist element. The existing diversity and multiplicity of savage and barbarian societies and cultures is explained by the expansion throughout the world of a limited number of *Kulturkreise* or culture-cycles and by their interaction. But the culture cycles themselves form an hierarchy. They did not all emerge simultaneously, but in a chronological sequence, so that their position in time determines their rank in the hierarchy. From four (or three) *Grundkulturen* or Fundamental Cultures there would have developed three early *Stammkulturen* or Ancestral Cultures from which evolved as many later Ancestral Cultures. These ten culture cycles form an evolutionary hierarchy of three stages or ranks, but not, as in the Evolutionist scheme in the sense that a whole cycle of one rank was transformed into and replaced by one of the higher rank. A *Stammkultur* is supposed to have developed out of the bosom of the corresponding *Grundkultur* in part of its spatial territory, so that elsewhere the older *Grundkultur* survived. Nevertheless none of the Fundamental nor early Ancestral Culture cycles can now be observed existing in a pure form. They are assumed to have thus existed in the past, but their original characters can be reconstructed only by inferences from the distribution of cultural elements among existing "mixed" cultures. The Culture historical doctrine, like other Diffusionist theories, is at least liable to reinstate supernaturalism. It is in fact a restatement in ethnographic dress of the biblical doctrine of the Fall of Man. Among the ten cycles of the hierarchy those in the ethnographically later and higher ranks are indeed distinguished by advances in technology. But these advances in material culture go hand in hand with a decline in morality and spiritual culture. The earliest culture-cycle was characterized by monotheism, monogamy and respect for private property. Only later in the Ancestral Culture-cycles do polytheism, magic practices, cannibalism, head-hunting, polygamy, *sati*, collectivism, etc., appear as degeneration phenomena.

I think I should remark at this point that there is no necessary opposition between diffusionism and evolutionism as such.[2] The theory of Cultural Evolution was not a theory of the mechanism of social change. Morgan himself, one of the founders of Evolutionist theory, explicitly invokes diffusion to explain the advance of specified societies from one stage to the next. Conversely the Culture-historical School does not explicitly deny evolution in considering for instance the advance from Fundamental to Ancestral culture-cycles.

Both classes of theory have been criticized in recent years, firstly on the ground that they treat culture as a mere mechanical aggregate of discrete traits; both are accused of accepting what Radcliffe-Brown happily calls the "Threads and Patches Theory" of Culture. In fact the English Evolutionists from Spencer onwards did rather arbitrarily select customs, institutions and instruments from miscellaneous points in the ethnographic record and arrange these isolates in logical sequences. The English Diffusionists similarly treated superficial similarities in techniques or rites as evidences of diffusion without considering the part played by the products in their respective contexts. The Culture-historical School have

constructed their cycles almost entirely from traits, similarly torn from their social contexts. The Functionalists quite rightly condemn this procedure. A culture is an organic whole whose constituent elements are integrally related and are what they are just because of the function they perform in the work of that whole. It cannot therefore be resolved into elements save at the risk of depriving such elements of their proper character. This criticism is valid both against the Diffusionists against whom it was originally levelled and against the Evolutionists of the Tylorian school. I do not think, however, it applies to the version of Evolutionism expounded by Morgan.[3] For it was whole cultures or societies and not isolated traits that he classified and arranged in a hierarchy of evolutionary stages, or, as he termed them, ethnical periods.

A second criticism is however just as valid against Morgan's scheme as against that of Spencer or Tylor—or for that matter against the culture-historical form of Diffusionism.[4] It is that he presents as an historical chronological sequence what is actually observed as a logical-geographical scheme. Now it is true that the theory of Organic Evolution, on which the theory of Social Evolution was modelled, was originally suggested by precisely the same sort of evidence. Lamarck deduced the evolution of species from a comparison of existing species of living organism and comparative arguments still are invoked in support of the doctrine. But Darwin could already appeal to the evidence of stratigraphical geology which discloses the chronological order in which the several forms of living beings emerged and existed on the earth. Palæontology in fact establishes that the several Orders and Families did in fact first emerge in just the order in which they appeared in the evolutionary hierarchy. Incidentally it liberated the terms "lower" and "higher" of a certain inevitable subjectivity. For in an undisturbed succession of geological strata the latest fossils will of course appear in the highest strata. Last century ethnography lacked anything comparable to the geological record extending backward in the time dimension with which the inferences from comparative study could be checked. Now, however, archæology is in a position to fill this gap to some extent. In some regions of the earth at least it can present a sequence of cultures succeeding one another in time comparable to the sequence of fossils in the geological record. What archæologists call a culture is indeed just an assemblage of traits—implements, weapons, houses, graves, burial rites, artistic styles—found repeatedly associated together. But the archæologist no longer regards these traits as lifeless curios; all had a human use, a function. In favourable cases archæologists already can, and hope in all cases to be able to, view these traits as functionally related together. The archæologists' conception of culture approximates therefore to the ethnographers'. Each is the creation of a human group bound together by common traditions. Divergences of social tradition explain the apparently arbitrary differences in implements, used for the same general purpose, in house plans, burial practices and artistic styles. Admittedly an archæological culture is much poorer than the corresponding unit in ethnography. For instance, even in the domain of so-called material culture, nearly all organic materials—all objects of hide, basketry, bark and textiles—have normally perished from the archæological record. These might, I suppose, be compared to the soft parts of organisms which do not fossilize and are accordingly missing in the geological record of anatomical evolution. The position is worse in respect of the physiology of preliterate cultures or societies. Language and all that it implies and can reveal is *ex hypothesi* lost in the case of preliterate cultures. Political, social, religious institutions can only precariously be inferred. Economic institutions can, however, some-

times be reconstituted with almost as much confidence as the palæontologist can reconstruct the habits of a fossil reptile.[5] In favourable circumstances archæologists can say how a society got its food and make reasonably reliable inferences as to the forms of co-operation involved in the food question, the degree of labour specialization within the groups and of the group's dependence on trade with other groups. In some cases still rather exceptional we can find good evidence for the social recognition of certain institutions such as chieftainship and war, but the absence of any institution can seldom if ever be deduced from archæological data. Again inferences are sometimes possible as to the social position of the sexes but I doubt whether the form of marriage or the kinship system could ever be inferred from archæological material. Perhaps you will allow me to pause for a moment to explain a little more fully the sort of evidence available for institutions—economic data are much more obvious. In some cemeteries and in some cultures prehistorians find a few burials, distinguished from the great majority by the structure of the tomb, the ritual and the exceptional wealth of the grave-goods. Presumably such exceptional graves are those of chiefs—in the sense of persons enjoying political and economic power and probably also religious prestige. They are in fact colloquially designated royal tombs or chieftains' graves. Similarly if a prehistoric settlement be completely excavated—this has very seldom been done—one house may turn out to be more commodious, more ornate and more richly furnished than any of the rest. It may fairly be called a palace or chieftain's residence. Incidentally a comparison of the funerary and domestic record warns us against inferring an absence of chiefs from an apparent lack of royal tombs. In one or two cultures no chieftains' graves have yet been found, whereas chieftains' residences have turned up in villages belonging to the culture. Warfare can legitimately be deduced from the fortification of settlements and from the presence of armour and certain offensive weapons such as the sword. But many weapons, such as bow-and-arrows and spears, may just as well have served as instruments of the chase. Fatal wounds inflicted by humanly fashioned instruments have been detected on prehistoric skeletons and constitute adequate evidence of homicide. They need not demonstrate social approval of the homicide. The fatality might in other words be due to murder, or it might have been incurred in a blood feud as the socially approved vengeance for a murder. But even a blood feud could hardly be termed a war. Nor could a head-hunting expedition. As to the social position of women, the manufacture of female figurines, apparently for magical or cult purposes, has often been taken as an indication of so-called matriarchy. I doubt whether this conclusion is legitimate. The figurines in question are of substantially the same kind as the Ishtar figurines manufactured by the patriarchal Babylonians, or indeed the votive figures of the Virgin popular among some equally patriarchal Christian societies. But somewhat better evidence may be derived from burials. In many prehistoric cultures we find occasional graves containing the bodies of a male and a female buried together at the same time.[6] Such are often termed *sati* graves and taken as evidence for the well-attested custom of the wife following her husband to the future life. That may be plausible where the woman has demonstrably been killed, is of nearly the same age as the man and equally well provided with grave goods. But in some instances there is a grave disparity in age between the two deceased, the woman being about half the age of her companion. Such cases suggest rather the sacrifice of a concubine or maid-servant than the immolation of a wife. Hence "*sati*" graves cannot be taken as affording evidence for or against monogamy, but they do seem to imply something about the position of women.

The female in fact seems to occupy the same position as the dog that is also sometimes killed and buried in his master's grave!

With these limitations prehistoric archæology can offer sociology in a few regions—notably Europe and Hither Asia—sequences of cultures that do succeed one another in time and that may each be regarded as equivalent to a society. How far does a study of the sequences support the conclusions of comparative ethnography? If the theory of unilineal evolution as expounded, for instance, by Morgan be correct the several series will be more or less parallel. Imagine them arranged in vertical columns. Furthermore on the same theory each series could be divided into stages in such a way that each stage occupies the same relative position in all the series. Note that the stages need not be contemporary when referred to the absolute time scale, but each must be everywhere homotaxial, to use a convenient term coined by Huxley. The so-called archæological ages of Stone, Bronze and Iron represent just such homotaxial stages. But this division, based on the material used for the principal cutting implements, is as will appear unsuitable for anthropological generalization though very convenient as a scaffolding for archæological classification. But another division based on economy is practicable and seems more hopeful. In all the areas where complete cultural sequences are available one can observe three very general stages that follow one another everywhere in the same order.[7] All the earliest cultures represented in the archæological record were based exclusively upon food-gathering—meaning the appropriation of wild food by collecting, hunting and-or fishing. This economy existed alone and universally throughout the Pleistocene period of geologists and characterized the archæologists' Palæolithic Age. It persisted widely at the beginning of the Holocene in the cultures classed by archæologists as Mesolithic. But then some societies began to control their own food supply by breeding animals or cultivating plants or practising mixed farming. This food producing economy begins with the Neolithic Age in the archæological classification, but of course is not confined to that stage. Finally some farming societies succeeded in producing such a substantial surplus of foodstuffs over and above the requirements of domestic consumption that it could be used to support a variety of full-time specialists living together in cities. The urban population comprised in addition to farmers specialist craftsmen, merchants, priests and ruler. I use writing as an essential criterion of civilization both because it is easily recognized and because it is associated with and the condition of mathematical and calendrical sciences and codified law. It marks a clear horizon in the sequences of archæological cultures in Europe, the Ancient Orient and Central America. Thus in the economic and technological domain we can recognize archæologically three main stages through which culture in those regions actually passed. They correspond well with the three main "Ethnical Periods" or "Status" recognized by Morgan, and I propose to use his designations—respectively Savagery, Barbarism and Civilization. Now Morgan subdivided the first two into three—Lower, Middle and Upper Savagery and Barbarism respectively. Some such subdivision is certainly needed. As thus defined Barbarism for example would include in prehistory cultures so far apart as those of the Neolithic inhabitants of Britain, of Homer's Achæans who warred with Troy and of the Iron Age Kelts and in ethnography the Kiwi Papuans and the Maori, the Kaffirs and the people of Benin? But I have been unable to find a basis of division that shall be really significant. The archaeologists' Palæolithic Age can indeed be divided into two sharply contrasted and very unequal sections. The Lower Palæolithic, comprising the whole of the Pleistocene save its last quarter, is

distinguished not only by the crudity of the stone industry, the small range of standardized specialized tools and the failure to utilize bone or ivory for implements, but also by a neglect of fishing even by societies living on the coast.[8] On the other hand some Upper Palæolithic societies possessed already all the basic techniques employed by food-gatherers to-day. Hence no technological basis for grouping pre-Neolithic cultures into consecutive stages is available. Between the beginnings of food-production in Neolithic barbarism and the emergence of civilization the archæological sequences in the Old World at least disclose a a rich variety of intermediate steps in each region. But I have failed to find any common criterion for grouping together as systadial, homotaxial cultures in every series. The archæological classification into Stone, Bronze and Iron Ages does of course disclose an observed succession of technological stages. But in the Old World Egyptians, Sumerians, Indians, Cretans, Hittites and Chinese emerged from barbarism to civilization during the Bronze Age, the Greeks, Romans, Kelts and other peoples only during the Iron Age. In the New World the Mayas, who were certainly civilized on our definition, were Neolithic from the archæologist's standpoint. Hence neither the metallurgy of bronze nor still less iron-working were necessary preconditions for civilization ; the archæological stages defined thereby are not essential steps from barbarism to civilization. The development of rural economy, being the basis of the food supply, would seem to offer a hopeful principle of division. In fact in the Old World sedentary agriculture based on the plough had everywhere replaced nomadic plot cultivation with digging stick or hoe before urban life began. But in Central America the Mayas had no plough and practised what in temperate Europe seems a very archaic and very wasteful system of slash-and-burn cultivation. Again advanced transport would seem an essential condition for civilization since that *ex hypothesi* implies the agglomeration of a substantial population in the city and the requisite food has to be collected over a considerable area. In the Old World most civilized peoples possessed wheeled vehicles, but the Egyptians did not use such for the first fifteen hundred years of their civilization. This exception might perhaps be explained away by the unique facilities for transport in a very narrow valley offered by the Nile. But again America offers an exception that is fatal. For the Mayas lacked all advanced transport and relied on porterage.

We have, however, been able to recognize three general and well-defined stages in the evolution of the primary economy. Can they be correlated with corresponding stages in the evolution of social or religious institutions ? Owing to the deficiencies of the archæological record already admitted we must not set our hopes too high. But allow me for a few minutes to follow up such tenuous clues as are available. All the oldest civilized peoples were divided into classes—a ruling minority and the subject masses. All in fact with the possible exception of the Mayas were ruled by monarchs. Kings or at least chieftains are recognizable by tombs and palaces orboth among nearly all*late* preliterate societies. But in none of the earliest Neolithic barbarian societies is such evidence at present available. Some Neolithic cultures are indeed so well known that the absence of such an institution may be claimed with some degree of confidence.[9] Among Palæolithic savages positive evidence for the existence of chiefs is equally lacking. But in 1940 Russian archæologists described a cemetery of post-Palæolithic but explicitly pre-Neolithic hunter-fishers on an island in Lake Onega.[10] Among two hundred graves containing skeletons lying on their backs, five stood out as exceptional. They were deep pits in which the corpse had been buried erect and they were moreover furnished with funerary gifts much more bountifully than the rest. Our Marxist colleagues admit that

such graves must be attributed to chiefs. So there is good archæological evidence for chieftainship in the stage of savagery just as there is good ethnographic evidence from America. Of course the chiefs definable archæologically are rather tenuous ghosts, but—for what they are worth—such ghosts haunt all the ethnical periods equally.

Let us turn to warfare. All civilized peoples appear ferociously warlike in the archæological as in the written record. Bronze Age and late Neolithic barbarians too often fortified their settlements and made what look unmistakable martial weapons. Early Neolithic barbarians and Palæolithic savages have left no such unambiguous evidence of bellicose habits. In *some* early Neolithic cultures all recognizable weapons are indeed apparently totally absent. Weapons are of course prominent items in the cultures of pre-Neolithic and Palæolithic savages, but these were doubtless primarily instruments of the chase and therefore give no evidence for savage warfare. Yet splint armour has been found in the graves of Stone Age savages in Siberia[11] and seems more appropriate to warriors than to hunters. There is thus some archæological as well as ethnographic evidence for social warfare even in the stage of savagery. Moreover fatal wounds inflicted by humanly made weapons have been observed even on Mesolithic and Palæolithic skeletons. I have already pointed out that these proofs of homicide do not necessarily indicate war. But some at least point to social approval of the homicide. Two Neanderthal skulls recently found near Rome[12] exhibit the effects of fatal blows, and one at least had been broken open to extract the brain precisely as among modern cannibals. This case belongs to the end of the Lower Palæolithic, and from that period less unambiguous but still very plausible evidence for cannibalism is relatively plentiful. Much earlier Weidenreich has convincingly argued that the earliest men at all well known—the *Sinanthropus* population of Chou-kou-tien near Pekin—often consumed human flesh. Among more advanced and later savages the use of human skulls as drinking vessels in the Upper Palæolithic of France and the celebrated nests of severed skulls—mostly belonging to women and children—found in certain Bavarian caves[13] point fairly clearly to head-hunting. But after all that belongs to the domain of ritual rather than political behaviour.

Finally as to the position of women we lack funerary evidence from the Old Stone Age from which comparatively few burials survive. But already in the Mesolithic of Brittany[14] and of the Crimea[15] cases of males and females buried together occur. In the Crimea the male was about forty years old, the female only twenty, and she had suffered amputation of two finger joints. Among later Stone Age savages the Russians have recently reported[16] from the Angara Basin a grave in which the woman, though richly caparisoned like her male companion, had been shot to death with arrows. Among Neolithic and later barbarians similar practices are well attested, but almost exclusively at the obsequies of persons of wealth and rank. In civilized societies *sati* was practised at the death of the pharaohs of the first two Egyptian dynasties,[17] but thereafter abandoned. I know no other cases outside India. Hence the available evidence for what it is worth give no support to the theory of a progressive decline in the status of women with the advance from savagery to civilization expounded by Morgan.

The necessarily defective archæological record therefore has not yet brought to light any reliable and obvious correlations between social institutions on the one hand and the recognizable economic stages on the other. As far as they go my results are scarcely compatible with the theory of unilineal evolution of societies and cultures. That does not mean that

societies have not evolved, but only that the process has been very much more complicated than nineteenth century rationalists could deduce *a priori*. Still less does it mean the adoption of any Diffusionist theory as an alternative. On the contrary the very archæological observations I have just summarized afford conclusive arguments for the demolition of the whole edifice built up by the Culture-historical School. As I have said, their fundamental and early ancestral culture-cycles can no longer be observed in a pure state, but are supposed to have existed pure in the prehistoric past. They should then be recognizable in the archæological record. In fact Oswald Menghin, formerly professor at Vienna, claims to have found them there. In the Lower Palæolithic Age he distinguishes three groups of archæological cultures that he equates with Fundamental Culture cycles; in the Upper Palæolithic and Mesolithic there should be again three main groups of cultures equivalent to the Early Fundamental Culture-cycles of the theory. I have no time, nor indeed need, to-day to examine in detail the arguments he had advanced with such enormous erudition in his *Weltgeschichte der Steinzeit* (Universal History of the Stone Age). In general I cannot refrain from remarking that the archæological data needed a lot of squeezing and trimming before they would fit the neat bed—or grave !—prepared for it by ethnographers of the Culture-historical school ! But one fatal observation must be recalled. Cannibalism, being a degeneration phenomenon resulting from the Fall, should not be a trait of the Fundamental cultures. Menghin in fact admits it first in the Upper Palæolithic. But even in 1931 the evidence for Lower Palæolithic cannibalism required a great deal of explaining away. The new evidence from Italy, already mentioned, appears quite intractable and in fact goes a long way to confirm the deductions previously drawn from European Moustierian sites and subsequently from the much older Chou-kou-tien material. Cannibalism thus appears as a very ancient and primitive human practice that was only gradually eliminated among societies that had advanced to the status of civilization. These archæological facts thus refute the essential contention of the Culture-historical school that progress in material culture has been correlated with regression in spiritual culture.

As for the Diffusionist doctrine of Elliot Smith, it was originally deduced from archæological data. The accumulation of new data since its formulation has simply destroyed its foundations; it turns out that at the crucial period Egypt was indebted to Asia, and not *vice versa*.[18] But no alternative cradle of civilization has come to light. But if archæological observations have disproved Diffusionism, they have not disproved diffusion. On the contrary archæological data have established opportunities for diffusion earlier and over wider areas, than could have been anticipated. Archæology cannot indeed prove rigorously the diffusion of ideas and inventions. It can and does observe the transfer by human agency of substances far from the regions where they occur in nature. Therewith it establishes the opportunity for intercourse between societies occupying widely separated habitats. In my Josiah Mason Lectures at Birmingham in 1947 and the summary printed in the current *Rationalist Annual* I have tried to show that it is precisely the fact of diffusion that differentiates Cultural Evolution from Organic Evolution. So I hope what I have said to-day will not appear purely negative. I have not refuted the theory of Social Evolution nor that of Diffusion, but have tried to correct both.

REFERENCES

[1] The doctrine has undergone many modifications in the course of its history and the nomenclature of the main Culture-cycles is still fluid. An English statement is available by Father W. Schmidt in Eyre, *European Civilization*, Vol. I, but I here follow Menghin's version, as set forth in *Weltgeschichte der Steinzeit*, Vienna, 1931.
[2] As established in detail by Leslie A. White, "Diffusion v. Evolution: an Anti-Evolutionist Fallacy," *American Anthropologist*, XLVII, 1945, 339-356.
[3] Lewis H. Morgan, *Ancient Society*, New York, 1877.
[4] Cf. Piddington, *Man*, 1940, No. 54.
[5] As one example out of many take G. Hatt, "The Ownership of Cultivated Land," *K. Danske Videnskabernes Selskab, Hist-fil. Meddelelser*, XXVI, 6, Copenhagen, 1939.
[6] Mariager has collected the European evidence in *Anthropos*, 1940.
[7] Cf. Grahame Clark, *From Savagery to Civilization*, London, 1946.
[8] Clark, *Antiquaries Journal*, 1948, 45.
[9] So W. Buttler, though writing under the Führer, had to admit the absence of chiefs in the early Neolithic village of Köln-Lindental ("Das bandkeramische Dorf. Köln-Lindenthal," *Rom.-German. Forschungen*, XI, Berlin, 1936).
[10] *Sovietskaya Arkheologiya*, VI, 1940, 46-61.
[11] *Okladnikov in Vestnik Drevni Isotrii*, I, i, 1938, 256.
[12] Blanc, "I Paleantropi di Saccopastore e di Monte Circeo," *Quartär*, IV, 1942.
[13] E.g., Offnet, often described, e.g., by Obermaier in *Fossil Men in Spain*.
[14] At Teviec; Pecquart, Boule and Vallois, in Institut de Paléontologie Humaine, *Memoire* 18, 1937.
[15] At Muzhak-koba, *Sovietskaya Arkheologiya*, V, 192.
[16] Institut Istorii Materialnoi Kultury, *Kratkie Soobshchenniya*, VII, 1940, 92.
[17] Reisner, *Development of the Egyptian Tomb*, 121.
[18] Cf. Raglan, *How Came Civilization?* London, 1939.

V. GORDON CHILDE.

Australia: Ethnology. **Mountford.**

String Figures of the Adnyamatana Tribe.

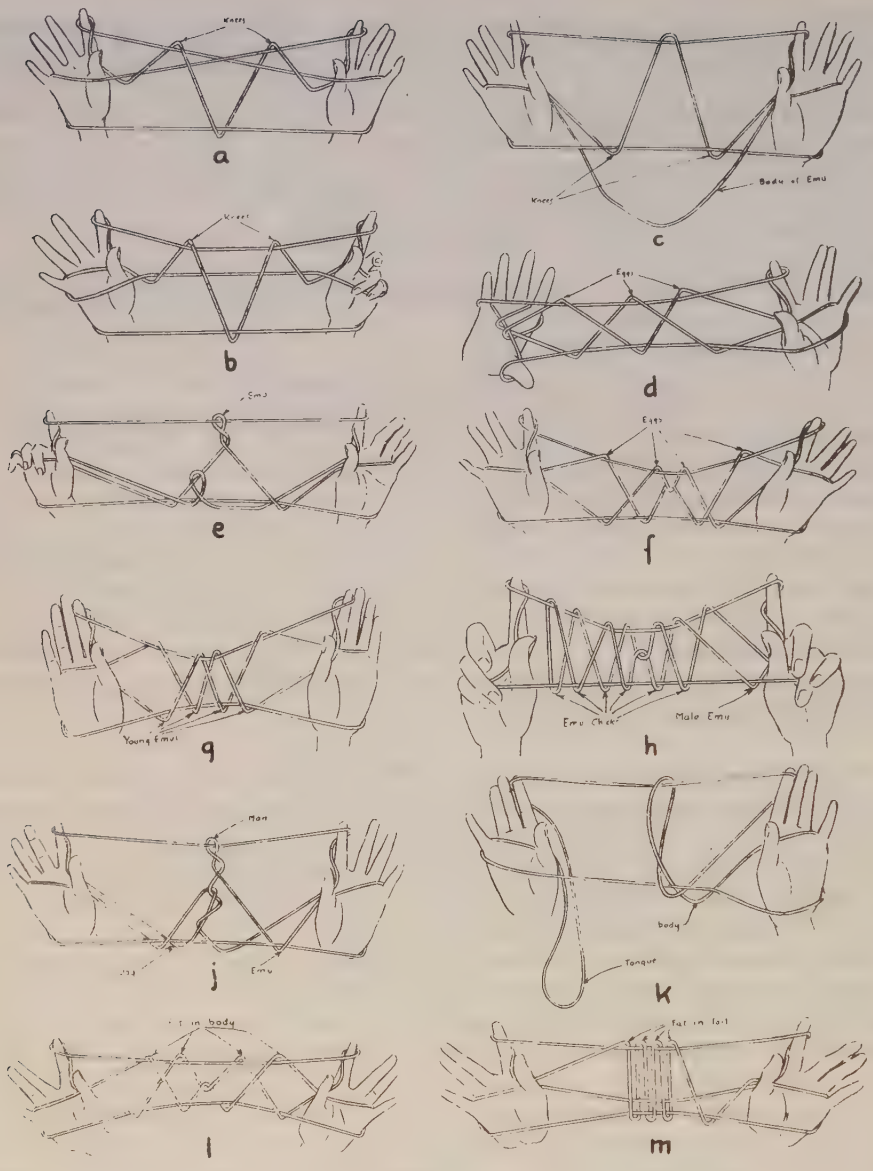
By Charles P. Mountford, Honorary Associate in Ethnology, South Australian Museum.

Although string figures were possibly first known in Australia, and were distributed over the greatest part, perhaps all, of the continent, they have received but scant attention from anthropologists. The outstanding contributors, to date, are Roth,[1] who recorded seventy-four string figures, but not the techniques, from northern Queensland, and Davidson,[2] who not only recorded an additional sixty-four and the techniques of manufacture, but also wrote a valuable summary on Australian string games in general.

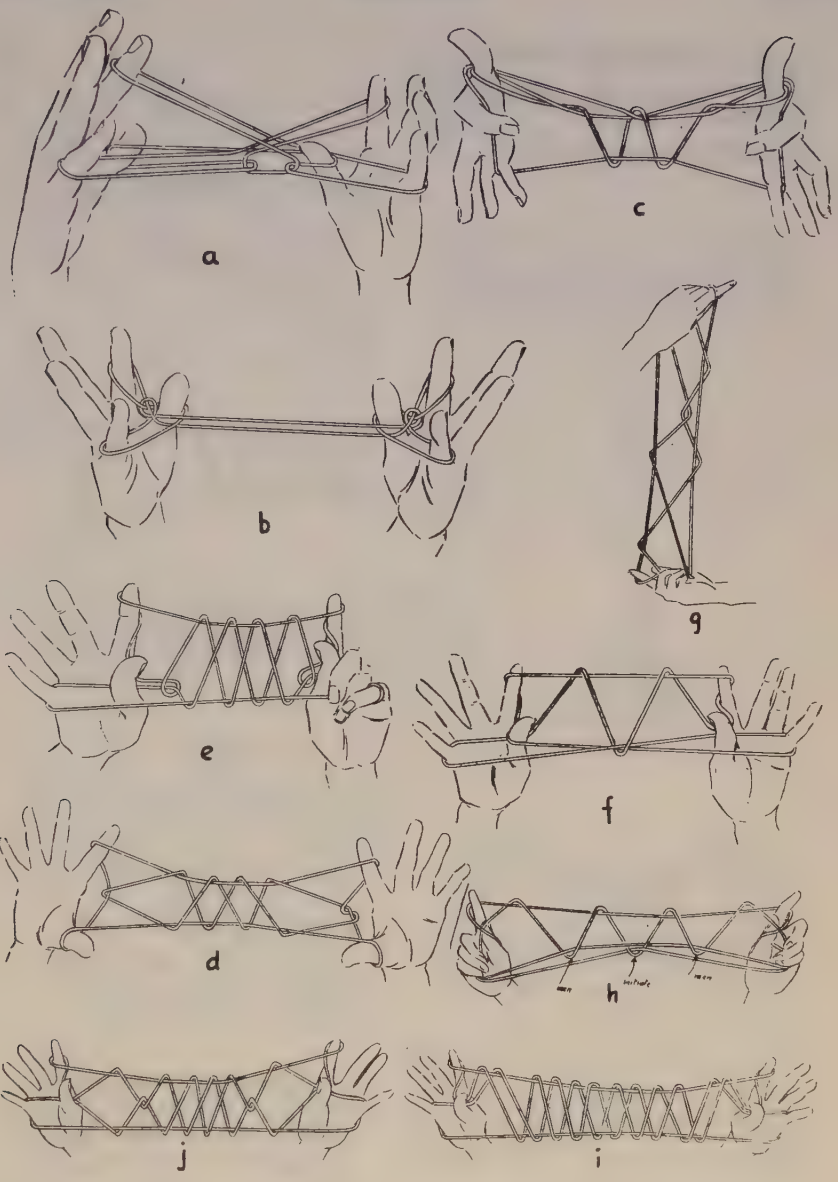
During 1937 and 1938 I was able to spend several short periods among the remnants of the Adnyamatana tribe of the Northern Flinders Ranges of South Australia, and whilst engaged on research I often noticed the aboriginal men and women sitting in groups, telling stories and illustrating them at the same time by figures, made by manipulating a loop of string with the fingers.

Although my other duties prevented me from recording but a small number of the string games in use, and none for writing down the techniques of manufacture, I was able to photograph forty-five designs and to gather the meanings of thirty-seven of them. The drawings in the following text figures were prepared from those photographs.

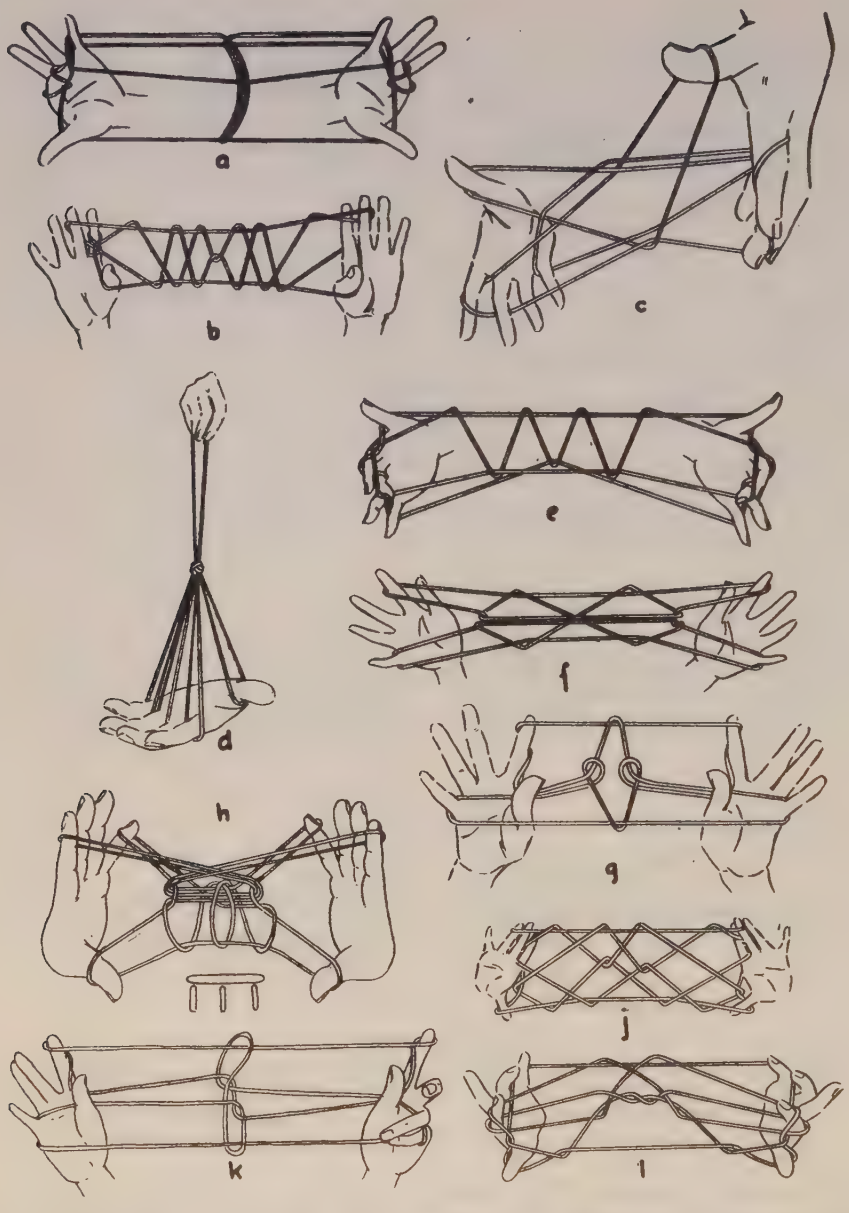
Most of the string games recorded belong to long series, none of which, unfortunately, is complete in this paper. Nevertheless, the record does indicate how the string games are used in illustrating stories and the large number of designs in use.



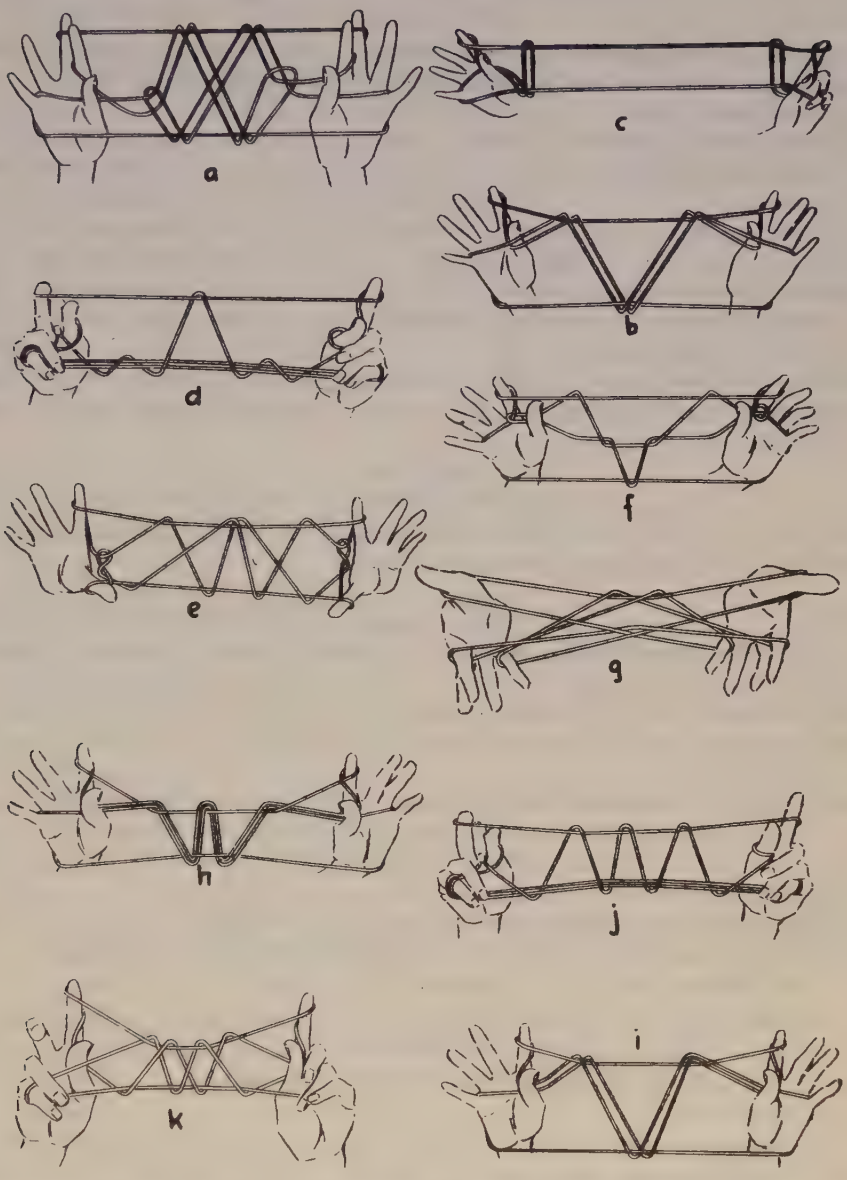
(a) *Emu making nest.* (b) *Emu laying eggs.* (c) *Emu sitting on eggs.* (d) *Emu eggs.* (e) *Emu standing up in fright.* (f) *Nest of eggs left by frightened emu.* (g) *Young chicks leaving nest.* (h) *Chicks being taken for a walk by male emu.* (j) *Men and dogs chase emu.* (k) *The dead emu.* (l) *Fat in the body of the emu.* (m) *Fat in the tail of the emu.*



(a) *Female dingo defœcating.* (b) *Two dingos copulating.* (c) *Female dingo, in pup, looking for a nest.* (d) *The small pups.* (e) *The larger pups.* (f) *Female dog bringing in meat for pups.* (g) *Sub-incised penis.* (h) *Initiate and men running through the camp on the first morning of the ceremony.* (i) *Initiates being taken through camp immediately before sub-incision.* (j) *Men walking about after the completion of ceremony.*



(a) *The new moon.* (b) *A bat.* (c) *A waterhole.* (d) *The root of the wild pear.* (e) *A small bird.* (f) *A fish.* (g) *The vulva.* (h) *A dead man being carried on the heads of his companions.* (j) *Flood marks on a creek bed.* (k) *Copulating.* (l) *A wallaby.*



(a) *The two snakes, Wiperu and Wulkeri.* (b) *The two snakes travelling.* (c) *The two snakes parting company.* (d), (e), (f), (g), (h), (i), (j) *and* (k) *are unidentified.*

Description of Text Figures

Text Figure 1

This series of string figures was used to illustrate a story of how a nesting emu, who had hatched out the chicks, was finally caught, killed and dismembered for eating.

(*a*) Emu making nest.
(*b*) Emu laying eggs.
(*c*) Emu sitting on eggs.
(*d*) Emu eggs.
(*e*) Emu standing up in fright.
(*f*) Nest of eggs left by frightened emu.
(*g*) Young emus leaving nest.
(*h*) Chicks being taken for a walk by male emu.
(*j*) Man and dogs chase emu.
(*k*) The dead emu.
(*l*) Fat in the body of emu.
(*m*) Fat in the tail of emu.

Text Figure 2

This series consists of two groups of string figures, one dealing with dingos and pups, and the other with a phase in a subincision ceremony.

Dingo Sequence

(*a*) A female dingo defæcating.
(*b*) Two dingos copulating.
(*c*) Female dingo, in pup, looking for nest.
(*d*) Small pups.
(*e*) Larger pups.
(*f*) Female dog bringing in meat for pups.

Subincision Sequence

(*g*) Subincised penis.
(*h*) Initiates and men running through the camp on the first morning.
(*i*) Initiates being taken through the camp immediately before subincision.
(*j*) Men walking about after the ceremony.

Text Figure 3

This is a group of string games illustrating many subjects.

(*a*) The new moon.
(*b*) A bat.
(*c*) A waterhole.
(*d*) The root of a wild pear (unidentified).
(*e*) A small bird (unidentified).
(*f*) A fish (unidentified).
(*g*) The vulva.

(*h*) A dead man being carried on the heads of his companions.
(*j*) Flood marks in a creek bed.
(*k*) Copulating.
(*l*) A wallaby.

Text Figure 4

Three of the string games, i.e. (*a*), (*b*) and (*c*), refer to the travels of two mythical snakes, Wiperu and Wulkeri, who created many natural features in the Flinders Ranges. The meaning of the remainder of the string games is unknown.

(*a*) The two snakes, Wiperu and Wulkeri.
(*b*) The two snakes travelling east.
(*c*) The two snakes parting company. (The loops pull back toward the fingers.)

The meanings of the remainder of the figures, (*d*), (*e*), (*f*), (*g*), (*h*), (*i*), (*j*) and (*k*) are unknown.

This paper records forty-five string figures from the Adnyamatana tribe of the Northern Flinders Ranges of South Australia. The meanings of thirty-seven of the figures are given.

References

[1] Roth, W. E., 1902. *North Queensland Ethnology*, Bulletin No. 4.
[2] Davidson, D. S., 1941. *Proceedings American Philosophical Society*, Vol. 84, No. 6.

C. P. Mountford.

Melanesia : Social Anthropology. **Róheim.**

Totemism in Normanby Island, Territory of New Guinea. *By Géza Róheim, Ph.D.*

The totem in Normanby Island is called *manua* or bird, and is identical with the *susu* or matrilineal clan. Each matrilineal clan has a totem and each matrilineal clan is the *toni-asa* or owner of a village, with the *hajhaj* or in-laws occupying a subordinate position in the same village.

On the whole they do not eat their own totem birds, although at Gomwa, Fergusson Island, near Salamo Mission, they said that they did eat their own totem birds but not their fathers', because that would cause them to die by *rara* (blood).

Gomwa is not a typical village, but one more or less artificially constructed by the whites. One part of the village belongs to *gegera*, little parrot. Another informant says that they will neither eat nor kill their own totem bird nor those of their fathers'. If they were to eat their own totem birds they would get head sores.

Sawaedi, also in Fergusson Island, is another peculiar exception. The inhabitants marry within the village, allegedly because they do not want the marriage gifts to pass out of the village. Some, however, are ashamed to do this and they follow the usual rule of village and totem exogamy.[1]

The belief concerning the *rara* or blood is closely connected with totemism and seems to indicate a kind of bilateral system. Bulema of Kelogeia said *Keguma* (if) *ida* (our) *buuna* (relation) *ta'unu* (we kill) *be* (and) *ta'aani* (we eat), *rara* (blood) *iunuda* (hurts us) *be* (and)

[1] On totemism and exogamy in Dobu, cf. R. F. Fortune, *Sorcerers of Dobu*, V. Y. Dutton and Co., 1932, pp. 29-36.

tamwawasa (we die) *manuida sana* (own totem bird because of). They die because they have eaten a member of their own clan. The food fills the body from the inside ; they get hot and it burns them. A man of the pigeon totem killed another pigeon and the blood killed him. The *rara* belief is also valid for the father's clan.

" If we eat from the hands of the people who have killed and eaten our fathers (meaning both paternal and maternal ancestors) we find a worm in our insides ; it stays there, our belly grows big and we die." If they eat food in a village where their fathers'[2] blood has been spilled, they will die. They cannot even enter such a village, the blood would rise from the soil, go into their feet and kill them.

At Sipupu, besides not eating the totem bird, they don't eat a man of their own totem. They say " he is my nose." They would also not fight against their fathers' village or kill a man from that village. It is taboo. They would not have intercourse with their sisters, i.e. real sisters, but they can sleep in the same house and play with them.

We will start our investigation of the meaning of totemism in Normanby Island by discussing some of the myths.

(I)

At Wejoko, Topibu married Tarobwaebwaedi. Both were of the *bwajobwajo* (owl) clan so that he married his sister, but only in the classificatory sense. The owl people come from a place called Bujuwa (Octopus).

Waine ihenatuna kana hesana Sinewweo. mwanena imiami mwanena
Woman gave birth its name vegetables. Her husband stayed with her husband
waine tjegabu ma ijasuru bareu kohinega tau iheonena iguai
his wife roasted[3] and she come down to the ground[4] then man she told she said
Kohinega tau ihonena " Kusuru ma nibaj ma quajaj kanuma ta kohinega
Therefore man she told you go down and fish and broth we drink and then
tau Tisuru raj ma Bujawa ihunuja ta iquaquaj Ja gidemusa
man came down again and octopus killed and they made a broth And like that
mwata dadabwa ivugua and mwata nuana mwanena nana kohinega irugna ta
snake d. snake[5] went in but snake thought wife his Therefore he went in and
tau waine ihegwae Tó nai nage Jahunuja gide muse
man woman told her What this is ? I had killed this (the octopus) like
mwata ma tou kaina jaraguja Upiri ukaharijana ma tau upili
the snake man sugar cane inside I stuck it. You run you bring it and man he ran
ta ikaharija Kohinega sibudeja ta Kurena ijaijai ma mwata ina
and he brought it Then they cooked it and Pot was hot and snake that
ihapwesa Kohinega waine ina idedoj ma isuapa
he jumped out Then woman that cried and went away to be killed by the enemies,
ma itaujama Turatara senahana kohina.
and came back (place name) and came back to it.

[2] Meaning all members of the father's clan.

[3] I.e., performed the customary warming or smoking ritual for a woman who has given birth.

[4] From the house built on pillars.

[5] A short pinkish poisonous snake.

The meaning of the myth is not clear. What is the connection between the octopus, the snake and the owl clan? I suspect the story is incomplete.

(II)

Tomekera, a *magisub* (eagle) of Naudubu, relates the following story about the origin of the *magisub* clan.

Waine sinebwana keukeuwanina. Waine sinebwana iwegawegaha.
Woman old was pregnant. Woman old went to catch birds.
Jagila sinebwana ma kusuia ta itaujeja[6] *Tomotaj silobeja sikitakikisija*
Wind big and rain and she went People found her they took care of her
masura sikebwalija ikaj Kaiwe simukeja isijata Ibokana
food they gave her she ate Fire they made[7] she warmed herself. She got well
ma ihenatuna ta waine iquajoha ma gwama ina sikamwamweja.
and she gave birth and woman she died and child that they her looked after.
Iheuwasijara ta sihejahije.
She grew up and they made her marriage.

(III)

Mumuga (Myth) *Wakeke* (White Cockatoo)

Waine matubuna idi asa Bwakera kana hesana
Woman with grandchild their village (place near Ubuja) her name
Gilugiluwaj Kenega tubunana guama
(name of a big cockatoo and also of a tree). Then with her grandchild child
gidarina me wainena Hadaja imiamia Bwa tubuna isuruja
small female in the house they stayed Then grandmother went down
Iloosijojowa ta Kohinega mamwanena sihirama ta
She swept it (the ground) and they made then with husband they came back and
kasa simia Koinega ilosiwa ma kajada.
village they stayed. Then they multiplied and they became many.

Tomekera adds the following remark. He was weaned and sent to Manikua, his mother's sister. He stayed there till he was big enough to run about. He remembers Manikua telling him; if I die you go back to your mother.

Sisijana bwa ihabaraja Dobu ta Bwatete kena imianaj ta
To Sisijana and she crossed to Dobu and to Bwatete village at she stayed and
kenega kasusairaj kenega. Aidi tubumao idi kasa Siwabobo.
so we multiplied therefore Some our ancestors their village Siwabobo.

This clan came from Dobu and the grandchild followed the grandmother again because she married in Dobu.

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[6] I.e., she swam down in the current of the flooded river near the garden. Her name was *Sine-waro-kuja* (Woman Grass).

[7] The same post-birth ceremony as in the other myth.

Kana queque inuguenaja bwa ilaguma ta neguamana queque kaena be
Her frog she bound it and put it there and that child the frog its leg and
nimana ilasedija ta ikenina kenega me-wainena igamwasoara ta iloguegueja ta
its arm broke and ate it therefore woman got angry and packed up and
itaonaja.
she stepped over.[8]

(IV)

Kauanamo of Majawa gives the following origin myth relating to the *wakeke* totem.

Kejoi ijionuja ne pouna ipisarinaja ta nigeia manua ta waine Keneha
Cockatoo layed egg that egg broke and not bird but woman to
isinabwa gauraja ta ietomotaj kajkajira[9] *me wainena Tomotaj ilopilidada*
grew up in a cave and became human really a woman People walked about
na ta silobena Sine sinebwainina kenega sikaukewenaja ta
and they found her Woman beautiful woman that so they brought out and
simeneja Gadigadiweweja ta sihainaja kenega
they brought her to the village of Gadigadiweweja and they married her then
sihenatuna idabararara kenega kebo waine Bebegwasija[10]
they had a child they multiplied so one woman at Bebegwasija village (Fergusson
Kabokagu Kauanamo ! igu kebe apwesa kebo waine itauja Bwaijowa
Island) I am Kauanamo ! my place came out then woman went Fergusson
ta Kesoraj imiana. Kenega kuapwesaja.
Island and at Kesoraj she stopped. Thus you came out.

The name of this young woman was *Ne garuweni.*
Young thing growing.

This name was given to her by the bird wakeke. The remark quoted above is from Kauanamo to Maa (i.e., thus you came out). Maa replies to Kauanamo : " And you look like a cockatoo " (which is strictly speaking true), " and you are like Matakapotaiataia ! " The latter's cave is at Kauanamo's place Majawa and he is the hero who has intercourse with his mother.

(V)

Origin Myth of the Gewaea Clan

Quaquamoa iminaha nunutu ma igu kedudurama ina mwanahena
(Shore of Quajaija) it grew nunutu palm and my ancestress her husband
ihunu hekekeko igaha ina bwajki ikewaj iheliej ina weda wete
he hit her behaved badly to her his banana she took he quarrelled her taro again
iheliej Ina hakahaj ina mwaratau ikewaj gea idahekejaha E
they quarrelled. Her yam food her flesh food he took not he gave to her and

[8] I.e., crossed, left them.

[9] First she was a very little woman like a little bird.

[10] Part of Maijawa district.

idoudou ka ikeno gide natunao etoj rua ma kaiwe sinabwana
she cried and went to sleep like that her children three two and tree big
maruana ibwakwarasaj inaomaho barekua Kenoha
maruana tree she shouted up, broke it it broke down to the ground. It was lying
keinaha igehea ma natunao nunutu koinaha sihana eaea ka kaiwe ina
on it she sat with her children nunutu tree on it they went up and tree that
itohoroa ihanaeleidjia ma natuna ina ileleuwejaha lelelej kumia gau
stood up it took them up and child that she petted lullaby you stop quiet
tamiagau tamajo ina weda takewa maguguja ina takajkaj takakjaj
we stop quiet your father his taro we took with quarrelling that we ate it we ate it
sauga bajwana gidg tamajo ina quateja mwaratai bwajki ma guguja ina takajkaj
always like that father his yam's flesh food banana with quarrels that we ate
gona ihaurisis kaiwe ina sikebwaubwejaha guama ina idou sihanaeja
morning breaking tree that they made a ladder child that cried they climbed up
natunao toj sikaharaidji sinadjiu wete sisukwandedjima kakahaj
children three they took them down their mother again they brought them down food
sikeledjia sihaija kaiwe ina huhunaj bwa siratuedjima
they gave them they ate tree that their trunk and they all brought them out
hanuaj sidou udji gide tamadiu ina kakahaj Enuasejej
village they cried with them like their fathers their food. He gave them freely
ma sikaj bwahesi simia hataja.
and they ate and then they stay for always.

The ancestress was a witch. The tree grew from its trunk. The miracle performed by the witch is making something grow where it is not expected to. It is about a family quarrel, the end is reconciliation.

(VI)

The *magisub* (eagle) myth is an exception because here the totem animal is derived from a male.

Ramoramo of Sipupu tells the story:

Ima maduau idi kebe saila Donei Nikua imiana
Our ancestors their place multiply (place name) in the deep sea she stayed
ihe natuna tomotaj mewainena tai itauja mitawa sabi lugwa ma ina kedewa
gave birth a person female man he went bush for hunt and his dog
iratua boasi ikaulopipia ibokejenawa guama igebeja ma tai nina
he came out water round water hole he peeped into it child he saw and man that
ihirama kasaj koda ikeweja ma udi bwejarina idokoja ikaharija
came back village basket he took and banana ripe (i.e., red) he put it he carried
ihira ma kodoina marakwa isipweja ihetabetabeja waira ina koina
he went back and basket that string tied on he went down water into it
koinega guama ina udi igebeja ma ipili kodoina kolima ekabe
therefore child that banana saw and ran basket that to it held
ikabisurua ta tai nina ilisikatuja ihanejeja ikaharija
she put her hand in and man that he caught her he pulled her up he carried her
ma itaujeja koinega sikamwamweja Isinabwa ihaj ihenatuna

and he went therefore he petted her. She grew up he married her she gave birth
koinega ijada kabokama magisubu.
therefore many we are eagles.

Magisub is a fishing bird (sea hawk?). He caught her like an eagle catches a fish. Guregoba, a big rock in the interior of the island, Lomitawa district, is their place of origin.

(VII)

Myth on Totem Friendships

Rahi madowau kohidijega kadamumuga gewara
A long time ago the chief's (or ancestors) from them our story little parrot
igimibwarena Wakeke isaja limanika Koinega gewara
began to make a hole. Cockatoo he scratched with beak again. Therefore parrot
hina hesiirurugu ena ikekenu makiana.
that one went in to slept with him.

Therefore they are called brothers.

Kohinega kegumu wakeke sihemwawasa gewara gigarihedi.
Therefore if cockatoo they die parrot bury them.

(VIII)

The following is a second cockatoo myth.

Ne guamana kasaja simemiuaja bwa ne wakekena. Muriedijega
That child into the village they took and that became a cockatoo. After that
idedoj ima kenega sibawau hane siguaj Natujo inona iguaj
cried came so they shouted up they said. Your child she heard them she said
muridiejega idedoj ima kenego sibuwau hane Siguaj "Natujo."
afterwards cried came therefore they shouted up. They said Your child.
Inona iguaj "O" wete siguaj ma kenega kana hesana. Iguaj
She heard them she said "Yes" again they said and then its name. He said
neguareni kenega siguaj kiura be gauraja kumija ataja
crowing like a cock then they said you go back and in the grave you stay forever
bwa ima guama kakewena koja manua gatuka waine kadauwena.
and our child we take you bird this one women we take it.

The geographical distribution of the various totem villages goes as follows:

Sipupu=Gewara, Magisub; Sigasiga=Gewara, Magisub, Bwajobwajo, Bunebune; Lomitawa=Kanegara, Bwajobwajo; Widiwidi=Wakeke, Bwajobwajo, Gewara; Kdologea=Bunebune, Gewara, Magisub; Sawatapwa=Kanegara; Majawa=Wakeke and various others; Loboda=Bunebune, Gewara, Bwajobwajo; Lomitawa=Kojakoja (Hill people), Bwajobwajo; Bwasikaena=Magisub.

All totem names are supposed to reveal something about the character of those who belong to that totem, for example, the members of the *magisub* totems are called *ketonouna*. The word *keto*=push or have intercourse with, *nuhuna*=their sisters—i.e., they have intercourse with their sisters.

The word *kejoj* means the same as *wakeke*, i.e. white cockatoo. Members of this clan are called *mwadijaha* (chewers of betel pepper, i.e. *barau* people or sorcerers, because the word *keoj* is regarded as onomatopoeic.

The word *kanagara* means big parrot, and *waigari*, you broke to pieces. Members of this totem are famous fighters, i.e. the human members of the clan, not the birds.

The word *bunebune* means white pigeon, otherwise *ejowana*, meaning those who order others to work. Iowana is also one of the Trobriand islands.

Bwajobwajo is the black owl. They also call it *gwabira* (rotten) and the members of the totem Gwabira, i.e. rotten like an owl eaten by ants.

Gegera is the little parrot, also called *kirakira*, meaning a maker of axes, or *losina*, meaning quarrel.

Dawata is a big black bird like the eagle. *Murua idi manua*=bird of Woodlark. *Dawata* is a sailor, and the human son of the mother-bird Jawata. The *jawata* is the north wind.

In Boasitoroba[11] we find the following distribution of totems: Sabaija=magisub; Kenolia=taujeso (another word for the raven *bwajobwajo*); Kareha=bwajobwajo; Nuadubu=magisub; Liasuru=bwajobwajo; Wedona=magisub; Wehosara=magisub; Rabewega=bwajobwajo; Kikakita mwasara=magisub.

Nearly all totemic myths contain the motive of a quarrel, thus reflecting on the alleged unity of the members of the same matrilineal clan and all concern a mother and her child. The one exception is the *magisub* myth, where notwithstanding matrilineal descent the totem name is derived from the male.

Totemism in general is based on the myth of *Kasabwaibwaileta*[12]. Kasabwaibwaileta is the hero of the *kune* (the *kula* of Malinowski). His brothers leave him to take care of himself in their search for the first *bagi*. On his return from the sky he invites his brothers to a big feast and with his magic rod transforms them all into birds. The birds fly out of the house and this is the origin of the totem birds.

A play hour with Akaripa (age 4) (October 18, 1930) shows the unconscious meaning of totemism very well. There are a number of very small glass dolls among the toys. He takes hold of these and says: These little children just came out of my stomach, and enacts the proceeding. Then he tries to put everything back again into the toy box, trying to put them all back into the box, i.e. more than the box will hold. Next day he is again busy sticking everything into the box. Then he gets some little toy birds. They are welcome representatives of the totem birds. He puts them all in a row, shoots them all with a shout of triumph—Gegegege! The siblings, the members of his own clan (birth from his stomach) are taken care of. Totemism in this area centres around the mother and sibling rivalry.

It is obvious that phenomena designated as totemistic in one area need not have the same latent content as similar phenomena observed in another area. The totem myth reflects social pressures as they actually exist, especially in this case, the pre-oedipal mother-child situation. But does it follow therefore that the people of Normanby Island have no oedipus complex? By no means, as I have shown in several cases. But the oedipus complex can be projected into other beliefs or myths not necessarily totemistic.

GEZA ROHEIM.

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[11] Boasitoroba and the other names mentioned above are districts. Those enumerated here are villages.

[12] Discussed in detail in my forthcoming book on *Psychoanalysis and Anthropology*.

Human Palæontology. **Leakey.**

The Age of Homo Sapiens.*

By L. S. B. Leakey, M.D., Ph.D., F.G.S., Curator of Corynda Memorial Museum, Nairobi.

One of the biggest unsolved problems relating to mankind is the question of how and where and when the species *Homo sapiens* originated.

There are two diametrically opposed schools of thought among leading students of human palæontology to-day. The one view is that *Homo sapiens* evolved during the later stages of the Middle Pleistocene, or even in the Upper Pleistocene, from the human stock which is represented by Pekin man, Java man, or even from Neanderthal man.

The other view is that all of these human types represent nothing but over-specialized branches of the human stock, which in due course became extinct, and that *Homo sapiens* is a species at least as old as the oldest of these other stocks, and is only a remote cousin of, and not descended from, any of these over-specialized species and genera of humanity.

Those who believe and teach that *Homo sapiens* is derived from the human branch that is represented by *Sinanthropus* and *Pithecanthropus* hold that these are " primitive " types of humanity still retaining certain " primitive " ape characters, such as the huge torus over the orbits, and they believe that, as evolution proceeded, these *so-called* " primitive " characters gradually disappeared.

In support of this theory they not infrequently quote the aboriginal populations of Australia and Tasmania, pointing out that these aborigines whom they regard as the most " primitive " of all human races living to-day, have large massive brow ridges, big mandibles and huge palates, and other characters which they regard as " primitive." They suggest that these races of *Homo sapiens* represent a possible phase through which all *Homo sapiens* passed in arriving at his present status, during the course of his evolution from some such creature as *Sinanthropus*.

Let us first of all examine the theory of the relatively recent evolution of *Homo sapiens* from the *Sinanthropus*, or kindred stock, and see to what extent it will stand up to detailed examination. The age of both *Sinanthropus* and *Pithecanthropus* has been shown in recent years to be Middle Pleistocene, and not, as was thought earlier, Lower Pleistocene, or even Pliocene.

If, therefore, this theory is valid, we have got to believe that *Homo sapiens* evolved at a quite incredible rate compared with any other mammalian species, and was subject to laws of evolution peculiar to himself, for it is not questioned by anybody that several distinct races of *Homo sapiens* are represented among the many skulls of Upper Palæolithic man in the Upper Pleistocene.

In other words, we have got to believe that during the geologically brief space of time represented by the transition from Middle to Upper Pleistocene times, *Homo sapiens* not only evolved into something very very different from the stock that is supposed to have given rise to him, but also, in the same short space of time, became differentiated into a number of distinct races.

So that, from the point of view of the time factor, the theory can only be accepted if we regard *Homo sapiens* as having had an evolutionary rate far more rapid than that known for any other species of mammal under natural conditions.

* This paper was read before Section F of the biennial meeting of A.N.Z.A.A.S. held at Hobart in January, 1949.

The supporters of this theory reply, however, to this criticism by citing domestic animals, such as dogs, cattle and sheep, and point out how very rapid has been the evolution of races of these groups of mammals, even to the point where, from their skeletal structure, some of the races might almost be classed as distinct species.

But there can be, in the writer's opinion, no valid comparison between the controlled selective breeding (leading to the creation of specialized races) in domestic animals, and the conditions under which man as an animal evolved during the Pleistocene.

The theory of the evolution of *Homo sapiens* from the *Sinanthropus* and allied stock also postulates that the type of man which is called *Homo neanderthalensis*, or Neanderthal man, represents a sort of intermediate stage, with a type like the aboriginal Australian and Tasmanian as the next stage, and the other branches of *Homo sapiens* as the later evolutionary trends.

But this view, when examined in the light of facts, does not seem a very happy one.

There are very many skulls belonging to the species *Homo neanderthalensis* now known, and the strange thing is that the ones which exhibit most markedly the so-called " primitive " characters are those which are latest in the time scale, while the earlier examples show so-called " primitive " characters less markedly. The Steinheim skull from Germany is—geologically—one of the oldest of the Neanderthal type of skulls, but it exhibits, to a far less exaggerated degree, the so-called " primitive " characters to be seen, for example, in the skull from La Chapelle.

In other words the evidence of the Neanderthaloid skulls themselves suggests that there is something wrong with the theory, and that the so-called " primitive " characters are specialized ones, which become more and more pronounced, and not less pronounced, as time goes on ; until extinction finally overtakes the species.

Then again this theory entirely ignores (or else simply puts on one side as doubtful) any find which points directly to *Homo sapiens* as being earlier than, or a contemporary of the non-*Homo sapiens* types.

Discoveries such as the Kanam mandible, the Kanjera skulls, the Swanscombe skull, etc., are simply left out of account, because if they were accepted the theory would collapse.

The aboriginal races of Australia and Tasmania are brought into the story by those who hold the theory of *Homo sapiens* being evolved from the Pithecanthropus-Sinanthropus-Neanderthal stock, because of supposedly " primitive " characters said to persist among them.

But the alleged similarities are not nearly so great as they are made out to be. While it is true that aboriginals from Tasmania and Australia had relatively large superciliary and super-orbital ridge development, the form of these ridges in the aboriginals is merely an accentuation of the form found in other races of *Homo sapiens*, and is quite different—morphologically—from the torus of the non-*Homo sapiens* types of mankind.

The mandible, too, of the Australian and Tasmanian is morphologically much more like an exaggerated and over-specialized jaw of the more ordinary races of *Homo sapiens* than it is like any jaw of a Neanderthal man.

It is much easier to see in the Australian and Tasmanian races an exaggerated specialization of some of the essentially *Homo sapiens* characters (such specialisation being probably

due to evolution and inbreeding), than it is to regard them as in any way intermediate between *Neanderthal* man and ordinary types of *Homo sapiens*.

Now let us examine the other theory—the one which regards *Homo sapiens* as having been evolved very early, and having been in existence at least from the beginning of the Pleistocene period.

Frankly the major objection to this theory is the apparent lack of specimens, so we will examine that objection first of all.

Owing to the strong hold that the other theory has had on men of science for so many years, it has unfortunately been a common practice to reject specimens of *Homo sapiens* type found in Lower or Middle Pleistocene deposits as spurious, or else to put them into a " suspense account," or else to doubt their identification.

The Swanscombe skull from Middle Pleistocene deposits near London has all the appearance of being *Homo sapiens*. Its age is not doubted, but there are those who say that, if its frontal had been found, it would have been *Neanderthaloid* in character, although they cannot point to a single typical Neanderthalian character in the parietal or occipital bones.

The Kanjera skulls are so patently of *Homo sapiens* type that it is the age of the deposits in which they were found that is questioned by the critics in this case.

The age of the Kanam mandible is similarly questioned.

In addition to these three finds a few other skulls and jaws of *Homo sapiens* type have been found in deposits older than the Upper Pleistocene over the past 50 years, but all were rejected soon after discovery and are now lost because they did not exhibit the expected " primitive " characters and so could not be accepted as genuine finds at a time when the theory that *Homo sapiens* was derived from Neanderthal man controlled scientific thought. Typical examples are the Moulin Quignon and the Foxhall jaws.

Now that a large number of workers accept as possible the alternative theory that *Homo sapiens* is not a very recent species, it may be expected that discoveries of *Homo sapiens* type in Lower and Middle Pleistocene deposits will receive the care and attention which they deserve, and the writer is confident that the next ten years or so will give the scientific world a number of unquestioned examples of early *Homo sapiens* specimens.

But leaving aside this aspect, what about other lines of evidence ?

Surely the proven fact that many different and distinctive races of *Homo sapiens* were widespread over the old world from England to China, and from France to Cape Town, in Upper Pleistocene times, is of itself, proof positive that the ancestral type of *Homo sapiens* must have been fully evolved by Middle Pleistocene times, and already well along his particular pathway of evolution in Lower Pleistocene times.

Surely the fact that it can now be shown that Lower Miocene apes did not have simian shelves to their mandibles or a massive torus to their brow points clearly to the fact that characters that have long been regarded as " primitive " in the ape-human stock are really very evolved and specialized characters, which occur in the end-products of some of the side branches of the family tree.

As for the so-called " primitive " characters in the Tasmanian and Australian aborigines I believe that, as I have said before, it is easier to account for them as excessive specializations from the more generalized *Homo sapiens* types than it is to regard them as modifications of Neanderthaloid forms, and, even if their culture can be called primitive in one restricted sense, I suggest that, from the point of view of anatomy, the Australian and Tasmanian

aboriginals should be regarded as examples of one of the most highly specialized of the races of *Homo sapiens*—so specialized that even without the effects of contact with civilization they were probably doomed to extinction in a, geologically speaking, relatively short time. I suggest that it is absurd to continue to regard them as " primitive " in the sense in which that word is commonly used by anatomists.

There is another aspect of the problem that is also worthy of consideration, and which, in my opinion, is important when one is drawing any conclusions ; that is the cultural one.

It is well established fact that all the skulls of Neanderthal type, when found associated with Stone Age cultures, have been found with either the Mousterian culture or the allied Levalloisian, and the association of the one with the other cannot be doubted.

Now such skulls of *Homo sapiens* type as have been found in Middle, as distinct from Upper Pleistocene deposits, have all been found in association with examples of the great hand-axe or Chelles-Acheul culture. The hand-axe culture was essentially the culture of a people who lived in the open, by lakes and rivers, *and not in caves*. In the nature of things, the skulls and skeletons of people who live thus in the open are far less likely to be preserved than are the skulls of people living in limestone caves.

It is also well established that the later stages of the great hand-axe culture were in fact contemporary with the Levalloisian culture, and, when faced with two such completely distinctive cultures, it is not easy to see how they could possibly have been made by the same type of man.

The making of the late Acheulian type of hand-axe required very considerable skill and dexterity, and it is much easier to conceive it as the work of *Homo sapiens* than as the work of some Neanderthaloid creature.

Moreover, Acheluian man had such mastery of his technique that he could make really first class hand-axes out of the most unpromising materials, such as quartz and quartzite and other untractable rocks, and he did not confine himself to flint and other easily workable materials, although he naturally used those when they were plentiful in the area he lived in.

Now it has been argued that the crude nature of the tools of Pekin man (who, remember, is now shown by geologists to be Middle Pleistocene, and therefore contemporary with hand-axe man in Europe and Africa) was due to the very poor materials that he had available, and not due to any lack of manual dexterity and mental ability.

Yet Acheulian man in some parts of western Europe and in Africa was at the very same period making perfect hand-axes from materials fully as poor in quality as that which was available to Pekin man. The conclusion is, I think, obvious.

It is inconceivable that the man who made the hand-axe culture in Europe and Africa was of the same brutish, over-specialized type as Pekin man. If he was not, then clearly, as he had a greater mastery of his materials, he was a higher type, and (unless we postulate another genus as yet undiscovered) we must think in terms of *Homo sapiens* as the maker of the hand-axe culture, and accept the Kanjera skulls and the Swanscombe skull as genuine remains of the hand-axe makers.

While there still appears to be a good deal of argument in regard to the real age of prehistoric skulls in Australia, such as those of Talgai, Cohuna and elsewhere, it is usually agreed that they are *not* of very recent age, and belong at least to the Upper Pleistocene.

If *Homo sapiens*, as a species, is not at least as old as the Middle Pleistocene, it becomes difficult to understand how a race of this species could have reached Australia in the Upper

Pleistocene times. For clearly this race must have been very well established and have had considerable control of materials to have been able to reach a continent which other Euro-Asian Plio-Pleistocene mammals failed to reach.

This brings us to another point. Although the vast majority of stone tools that have been described from Australia are clearly of relatively recent age, the writer has seen one or two really classical examples of hand-axes from Australia. He was given to understand that they were surface finds, which could not be separated from the more recent type of Stone Age tool assemblages. This may well be true, but on the other hand it would not be surprising to learn that a true hand-axe culture had been found in Australia or Tasmania in deposits which could be geologically dated to the late Middle Pleistocene.

If and when such a site is found, and if human remains are found with it, the writer, for one, will expect them to be examples of a much less specialized type of *Homo sapiens* than is represented by the present-day aborigines.

L. S. B. Leakey.

Papua: Social Anthropology. **Austen.**

Notes on the Turamarubi of Western Papua. *By Leo Austen, Dip.Anthr. (Syd.), Resident Magistrate (Retired), Territory of Papua. Continued from Vol. 4, No. 1.*

The Decoration of the Darimo Roof.

When a new long house has been almost completed, the final decorations are made to the inside of the roof. These consist of teased sago-leaf streamers (*piruhuo*) hanging from the *kaiani tata* roof-bearers and also over the side doorways. To obtain these streamers the men of the village set forth in their canoes in mass formation soon after sunrise. There may be a line of canoes nine or even more in width. As they paddle away, the leaders in the prows start up the " Song of Guri " (*Guri Gido*). *Guri Demete buburi Biwau buburu* are the opening words of the first verse of the song and it is caught up by the other canoemen. The various verses of the song are sung until the sago-making place is reached some distance away from the village. At this place, the men gather the new unfolded sago-leaves from the centre of the sago-palms and, when sufficient have been collected, return to the village, still singing the song of Guri's migration southward from the peaks of Biwau and Demete in the Leonard Murray Mountain.

The women in the village, hearing the singers, rush down to the canoes with *kemehe* and beat them and pretend to club the men. These *kemehe* sticks are made of black palm and are used by women for digging out grubs from the pith of sago-palms.—The women and children then return to their family houses and the men go up into the new long house. It is now well into the afternoon and, arriving inside the *darimo*, the men sit down. The unmarried men break the sago-leaf sheaths and strip the young leaf into fringes, which will form the streamers. The first part of the Song of Guri is still sung but no drums are beaten. The women stay inside their family houses. These dwellings are tabu to adult men during such a period. The men have, more or less, to fast during the day since the womenfolk do not cook any meals.

While the single men are singing, they tie knots in the fringe and call out the name of some lover, who has come of her own free-will and offered her favours to the man. This type of woman is called *karahi*.

After sunset, about seven o'clock in the evening, the men begin the second part of the Song of Guri, but the women still are not allowed into the long house and the men do not receive any food from them. The singing continues until sunrise, when life in the village once more becomes normal. The Song of Guri is called " a single man's song," and the *piruhuo* fringe can be made only by bachelors.

The Completion of the Darimo.

When the long house has been practically completed, it was customary for the village to go head-hunting. This was probably done to " blood " the *darimo*. However, during my time at Kesemuba I was unable to go deeply into this matter as the people were still rather timid about talking of a custom that was probably in use not long before I arrived there.

There is, however, another interesting custom connected with the completion of a new *darimo*. This is called *ohio darimo kowaroiye*, which merely means " the new long house game," and it is played as follows.

From the forks of the *haro* posts, along each side of the main hall, a bundle of sago-flour is hung. Between the roof bearers and the roof, pieces of split sago-midrib are inserted, so as to overhang the main hall. About 10 o'clock one morning a bachelor from the salt-water end of the *darimo* descends the *hawa* ladder and runs around the long house to the bush end. The youth climbs up on to the *nupu* platform and steals a piece of firestick that has been left there and rushes through the low entrance on the *nupu* side. The men at this end, seeing him, make an attack on him but he beats them off with the firestick and runs along the main hall to the *hawa* end and places the firestick in the fireplace on the *hawa* platform. A bachelor from the *nupu* end now descends his ladder and climbs up to the *hawa* platform, steals the firestick and enters the main hall by the *hawa* doorway. He is then set upon by the *hawa* men but manages to beat them off and rushes down the hall, followed by the *hawa* lad. The former places the firestick once more in its original position near the *nupu* ladder and the *hawa* lad returns to his end of the *darimo*. Soon after this the lad from the *nupu* end again descends to the ground and this time drags behind him a very long length of *calamus* vine (*waki*), which he pulls up on to the platform and into the long house. The *waki* is hauled along the main hall until it almost reaches the *hawa* door. The lad then returns to his end. All the males in the *darimo*, both young and old, take up the vine at the respective ends of the long house and a tug-of-war ensues for some time. When one side seems to be winning, a man from the *hawa* end runs to the middle portion of the hall and cuts the vine through, thereby causing all the competitors to fall to the floor.

This completes the game for the time being and the vine is thrown away. The males then go down to their canoes and paddle off to hunting places. In the evening, the hunters return with bush pigs, cassowaries, bush rats, bandicoots and cuscus. Each section of the long house assists another to carry the food back, and the food is then cooked. When ready, this food is distributed in such a way that no clan eats the food that it has killed. The salt-water section hands its cooked food to the middle and bush end sections. The bush end section hands its food to the middle and salt-water sections and the middle section gives its food to the two end sections. The sago hanging down from the *haro* posts is also taken down and cooked but it is not distributed among the different sections. When the feasting is finished, the people tell stories and gossip for a time and then all go to sleep.

The next morning when the birds begin to awake and call out, the owners of the *haro* posts light the sago-midribs which are hanging over the *gabuo* or main hall. This causes the main hall to be ablaze with light. The day previously the men had collected numbers of the soft pithy stems of the midrib and now these are used by all as clubs and spears and a battle royal takes place until daylight, when the lamps are extinguished, the game finished and the village resumes its daily round.

Since, in times gone by, young men and especially women could not enter a new *darimo* until the warriors of the village had taken a head, it was more than probable that a *mipa* head-dance would take place prior to playing this game and the hanging of sago on the *haro* posts may have had some reference to the bundles of sago used in certain dances and the bundles may represent bodies of human beings, for in the *Barari* and *Bagoi* head-dances, the sago bundles are always placed in an erect position and not horizontally. The *waki* vine is in daily use and the various parts of the *darimo* are tied together with it. That which is common in everyday use seems to have a sacred significance when used ceremonially and the *waki* certainly is mentioned in the sacred head-hunting *Mipa* song.

There seems little doubt that the foregoing game is played with the fundamental idea of emphasizing the solidarity of the tribe. Each end of the *darimo* must be on terms of friendly equality with the other, as well as with the middle section, while the latter must be so with both ends of the long house. Food gathered in the chase should be distributed but sago and sago-grubs (*gemi*) do not come under this category, possibly because they are obtained by the women.

After the abovementioned game is concluded, there does not seem to be any further ceremonial and the remaining part of the *darimo* is completed. Of course, if a *mipa* head-dance had been held before the completion of the *darimo*, no doubt the Barari head-dance would take place soon after the completion of the *darimo*.

(*viii*) *The Daily Round of Village Life.*

If one calls at a Turama village any time after nine or ten o'clock in the morning, one usually finds the place deserted and the village people will be called in by conch shell (*kibi*) which is always to be found on the top of a stick a few yards away from the long house. There are, of course, always a few old men and women in the village, and perhaps a few adults who may be sick or who have some work to do in the village—such as completing a canoe, making paddles, mats, dresses or some other personal work which entails something to be made that is not necessarily manufactured in the bush.

Breakfast is not usually cooked, and if one is hungry there is always a piece of cooked sago available which has been left over from the previous night's meal. On rising, there is a certain amount of cleaning up to be done by the females. However, the dirt and rubbish is swept between the floor boards on to the ground under the houses, and the village pigs root among the mire, where they find all sorts of refuse which is edible to them.

Those who go away, if males, may have to cut down sago trees for the females of their family, or they may go out hunting wild pig, cassowary, wallaby, cuscus, birds such as hornbills, parrots, gowra and smaller pigeons, and smaller birds the feathers of which are used for adornment. Again, there is always the chance of meeting an iguana, or a carpet snake—the smaller species of snakes do not appear to be eaten. If they visit the smaller creeks for fishing they would probably be accompanied by other male friends or their wives and some of

their children who help bank up a stream before using *sadi* (a derris root fish poison). Near the sources of the creeks or tributaries are to be found certain snakes (sp. *Achrocordus papuanus*) which live in the mud, and the skin of which is much valued for drum tympanums and for trading with neighbouring tribes. Sometimes the males go out fishing either alone or with others in a canoe in the estuary or near islands or sandbanks where fishing grounds belong to the local tribe. Besides fish, crayfish and crabs are obtainable, and these latter are usually procured by the females—even small girls taking part in this work. When out fishing, fish may be caught by shooting with bow and arrow, or with a spear, or with small nets. The womenfolk usually set the thorn-lined fishtraps which are much used in this district.

When the females go away to work, unless they are accompanied by their husband, they may work in groups in the sago swamps near to one another. Women and girls do not as a rule wander far from the village alone, though, when they do reach their work place, they may leave the main party for a time to meet a boy friend. While the women and girls work, there is much chattering and gossiping. This is a well recognized characteristic and it is even mentioned in the *Guri* song, where the chattering is compared to the great fuss the little *suere* bird makes up in the tree-tops.

When the people go out from the village one of the first articles they think of is their sleeping mat. In a district like the Turama, where it rains so much, the mat forms a protection from the weather as well as being useful for lying on. The mat is usually carried, when not in canoes, rolled up and suspended over the shoulder by a string. Inside the mat, axes, pieces of calico, and other oddments may be wrapped. As a rule, when a native expects to be home before nightfall, food is not carried, as this can usually be obtained at the place of work or in the bush.

The first food of any consequence is taken before noon, but the main meal is that eaten after sunset. Unless in the bush or camping in a lean-to on an island, the women come back to the long house about 4 p.m., and then set about preparing the dinner, after putting away their gear and perhaps going down to the river to wash. The evening meal takes some preparing. The sago-flour is rolled up in two sago leaves joined together with little pins cut off a sago leaf midrib. This parcel is about one inch in diameter and from 10 to 18 inches in length. It is placed over the hot glowing ashes on the mud fireplace and is cooked until the leaves are well charred and the outside part of the flour is gelatinous. The inside as a rule is not properly cooked, though on special occasions a woman may cook it so well that practically the whole of the flour has become gelatinous. I lived on this sago for a week and found it unpalatable and tasteless even when mixed with other particles of food. Of course, it was just that I was unaccustomed to it, and the same applies to the Turama, who when in gaol did not like a diet of rice continually and we had to make sure to have plenty of sago always in stock. The sago-flour may be mixed with pieces of fish, or bush cabbage, or even sago-grubs so as to make the food more appetizing.

In addition to the sago-stick, the meal might consist of a few poor taro or a bundle of sago-grubs or yabbies cooked in sago leaves. Fish is usually roasted in the ashes, but meats could also be boiled in an internode of bamboo. To-day, however, there are more and more trade saucepans and billycans finding their way into the Turama, and this has helped considerably to make new dishes. In the Goaribari district sago was always cooked in bamboos, but although it is done on the Turama, the usual method is in sago leaves. It will be seen

therefore that in the past practically all food was roasted or broiled, and the only method of boiling was for comparatively small pieces of food in bamboo. Large creatures such as pigs or crocodiles would be roasted whole, but then the flesh would be eaten half raw.

Sago (*dou*) forms the staple diet of the people. There are large areas of sago in the great swamps behind the main rivers. These prehistoric forests are more than sufficient to feed all the people, and therefore there is much wastage of the standing growth. The wild sago is very thorny, but a certain amount of imported cultivated sago is planted, which is thornless, and has a much better flavour. Sago-flour can be of two colours, either white or pale mauve.

It is the man who chops down the sago tree and cuts the trunk into sections for easier handling. However, the latter is not always done, and the tree may be left without dividing it. After it has been fallen, the trunk is split and about a quarter of the bark opened up so that the pith may be got at. This work falls to both male and female. The rest of the operations are performed by the female. The woman now takes a sago-adze. This is formed of a piece of a branch of a tree which has a handle about 18 to 20 inches long and attached to the end of it is the portion of its mother branch, about nine to twelve inches long. The latter is set at about an angle of 45°. An internode of bamboo may be placed on the shorter piece, leaving the knobby node at the end so that when used by the sago maker it chops up the pith into very small pieces. The sago maker has already placed the butt of a sago branch in a forked stick and the butt forms a trough running down to a bark basket on the ground. The woman then puts the sago pith into a finely woven bag of young sago leaf, and placing this at the top of the trough pours water over and into the bag, which she now kneads and the water exudes as a milky fluid flowing down to the bark basket. There the water gradually seeps through the basket, leaving a white or mauve residue which on drying is sago flour.

It must have been very difficult in pre-European days to cut down sago trees with stone axes, and the work would have been much slower. Sometimes imported celts were used in the sago adzes, but the bamboo is the more usual. How much sago flour can a woman make in a day? As a rule I think she would make about a kerosene tin (four gallons) full, but this amount would be increased when food for a feast is being provided. As the bark basket gets filled, it is emptied on to sago leaves, and when she has sufficient it is pressed together and a covering of sago midrib (*kipa*) is placed round it and tied in place with sago twine. The bundle is now cylindrical, about 2½ to 3½ feet in length and about 9 to 11 inches in diameter. Much longer bundles are also made and in feast time they are as high as a man and 12 to 18 inches in diameter, and sometimes even wider. Government officials buying up sago should make sure these large ceremonial bundles are fresh, for very often the sago has gone sour by the time the people are ready to dispose of them. The bundles when completed are brought into the village and placed in the owner's cubicle or family house, but they may also be stowed against the central walls of the cubicle in the main hall.

Sago grubs (*gemi*) are the larvæ of the red palm beetle (*kotami*).[2] To obtain the grubs the sago trees are cut down and the trunks have the bark split along the middle to allow an opening into the pith below. The beetles then lay their eggs in this opening or probably in the pith itself. These eggs eventually change into larvæ which feed on the now soft pith and

[2] The red palm beetle belongs to the group of Rhynchopora which have " a head prolonged into a beak, with small cutting mandibles at the apex; the tarsi are four-jointed." " All beetles undergo complete metamorphosis from the egg through larva and pupa to the imago." " Resting stage is the *pupa libera*, i.e. one in which the wings are not soldered down." (Extracted from *Aust. Encycl.*).
The various stages of the *kotami* beetle will be referred to in the section on the *Epia* ceremony.

burrow all through it. One sago trunk contains hundreds of larvæ and the natives can tell by putting their ear to the trunk when the larvæ are fully matured and almost ready to change into the pupa stage. The larvæ—*gemi*—are now about an inch and a half long, and are nice and fat. The head of the *gemi* at this stage already has the hard unedible forehead and beak. The grubs are now collected in sago leaf bundles and brought home to the village in the women's dilly-bags. At ordinary times sago trees are not cut down specially for beetles to breed in, but often a section of a tree may be left for this purpose after using the rest for sago making. Again old trees after flowering are no good for sago, and may either fall down of their own accord and thus split the trunk, or they may be cut down by the natives themselves. Before a dance or any special feast many sago trees are felled purely for *gemi* breeding.

We find several references to the *gemi* grub in many of the songs. For instance in the head dance *Bagoi Maramu* we find a line: *Neabo au gemio au Neabo.* This refers to the innumerable *gemi* on the large island of Neabo, and there are three other lines in the song stressing the numbers of *gemi* on Neabo. However, it will be seen right through these notes that the *gemi* will be mentioned many times in connection with various dances and ceremonies.

One cannot call the Turamarubi gardeners, though each family has a plot of land fenced from bush pigs in which may be planted a few taro, or taitu, sugarcane, mimia, bush spinach, bananas, manioc, sweet potatoes, pawpaws and pineapples. The last four have undoubtedly been introduced, although it is possible that the flying fox may be responsible for the original introduction of pawpaws, as sprouting seeds are often dropped in their excreta. There are two species of manioc which probably came from the west. Williams[3] speaks of poisonous and non-poisonous varieties, but I think the poisonous variety is one which has a poisonous central string through the root, and if this is cut out the rest of the root is non-poisonous. There are many wild taro to be found in the district, but they do not form edible roots. The edible taro must have come from the north, and in one of the myths Guri, an ancestral hero, meets Hido, the Kiwai hero, and exchanges taro with him for fire. Mimia may also have come from Kiwai, but it is possible it came from the bush people among whom it could be found in its wild state. Wild bananas are also to be found on the Turama, but they are full of comparatively large black seeds which are used in making necklaces. Among the various cultivated varieties we find both the plantain and the true banana. The so-called bush cabbage or spinach must have been obtained from their northern or eastern neighbours, as these people grow and eat large quantities, and I believe this is one of the reasons that we find fewer ulcers among the bush people.

There are numerous fruit trees growing in old gardens and in the forest, many being indigenous. The wild mango which grows there has a much flatter fruit than the cultivated type and it is more round than oval. It tastes very much of turpentine, and I certainly did not like its flavour. Some cultivated mango seeds have now been planted in the district.

Breadfruit is grown, but there are not so many trees, and it too has probably been introduced by birds. Williams[4] speaks of the breadfruit in the trans-Fly area being introduced there from the Wassi Kussa, but I doubt that, for on the middle Fly River above Everill Junction there are hundreds of breadfruit trees of great age growing inside from the eastern bank of the river, and these usually are found among the primeval forests, and where

[3] Williams, F. E. W., *Papuans of the Trans-Fly*, Oxford, 1936, p. 216.

[4] *Op. cit.*, p. 216, fn.

I am certain neither the Lake Murray nor the Lake Daviumbo tribes have planted them by hand. Their distribution could only have come about through the agency of cassowaries, or large birds like the gowra pigeon or the hornbill. I doubt if the wild pig would come into the picture, as it seems to be able to digest all the seeds it eats.

Coconuts grow here and there in clumps, or as individual trees, but there are no large areas of them. Individual trees may have been planted by hand, but where clumps are I think they are due to the dropping and sprouting of ripe coconuts from the original tree. In any case, coconuts do not grow well on the Turama, and that may be due to the climatic conditions. The original coconuts were probably washed up on to sand or mudbanks in the estuary and could have come from the coastlands round Kiwai or the Wassi Kussa.

In clearing their plots in times gone by when there were only stone axes available, most of the larger trees were left standing, and after the smaller trees and saplings had been cut down those not used in fencing would be burnt. To-day, with iron axes gardening is made easier, but the people have still little idea of making large gardens. Certainly there is not much good garden ground near the villages, though there is good firm ground some distance away, but fear of the bushmen towards the Bamu River may deter them from utilizing this better soil.

The main animals domesticated are the pig and the dog. The domesticated pig is a near variety of the wild pig. As a matter of fact, when out hunting and a sow is killed and some very young sucklings are found, the latter are brought home and suckled by the women-folk, and these pigs as they grow up are most tame and one might say even intelligent. The village pig gets most of its food by rooting under the houses as well as digging up roots in the bush, but the villagers also throw them left-over scraps of sago sticks, etc. The people of the Turama all have myths which tell of a descent from a sow. Although they did not tell me so, I am of opinion that this ancestral sow had five toes, for they spoke of this species many many times, and it was not until a good while afterwards that I found that there were still in existence a species of five-toed pigs which were domesticated by the bush people to the north-east in Nawagera and other Ikobi villages.[5]

The village dog has much of the dingo in him and does not bark, but only howls. There are some purer specimens, and to-day these are undoubtedly mixed with European dogs bought from neighbouring tribes in closer contact with the Government. Whether there was an admixture of the real dog with the dingo in pre-European days I am unable to say. However, among some of the tribes in the Star Mountains of north-west Papua, who had no contact with Europeans prior to my arrival, I found a variety of village dog that was not dingo-coloured, but was black and white. These dogs, too, did not bark, but could only howl like a dingo. Perhaps they came from Indonesia via the Bamberano River in north Dutch New Guinea. If so it is not improbable that the same species over a long period of years would gradually be traded eastward along the mountain villages and some might have been brought down to the Turama district in the time of Guri's migration from Mt. Leonard Murray. Again Indonesian voyagers may have traded some of these dogs along the coast of New Guinea to the north of the Sepik whence they could gradually have found their way into the central mountain ranges in which the Turama has its source.

Young cassowaries and even cuscus are tamed and kept in the village, but eventually are killed for food, while the feathers and fur are used for personal decorations.

[5] See *Australian Geographer*, Vol. 2, No. 4, 1934, p. 24 and fn.

A few fowls may be seen here and there, but they are of recent introduction and the village land is not very suitable for them.

L. AUSTEN.

(To be continued)

PROCEEDINGS OF SOCIETIES.

Annual Report of the Anthropological Society of New South Wales, 1949. *Summary of the report delivered at the Annual Meeting of the Society, 6th December, 1949.*

The Council has pleasure in submitting to members the twenty-first Annual Report of the Society for the year ended 30th September, 1949.

Total membership is now 139 members, comprising three life members, seven honorary life members and 129 ordinary members.

During the year the following new members were elected: Mr. H. J. Coate, Miss R. Swann, Mr. W. Harney, Miss M. E. Taubman, Dr. K. E. Read, Miss M. E. McIntosh, Miss B. Glaser, Miss D. E. Stansfield, Mr. I. D. Hutchinson, Mrs. H. M. Robinson, Mrs. G. Oschatz and Mr. J. R. Ryan.

Three members resigned, and we regret to report the deaths of the following five members: Mr. G. W. Watkins, member of Council and past Honorary Secretary; Mr. H. J. Wright and Mr. W. J. Enright, both foundation members and past Presidents; Rev. E. McKie and Mr. G. K. Dunbar.

Four general meetings were held at the Department of Anthropology, University of Sydney, at which the following lectures were delivered:

1948—

November 22nd.—Annual General Meeting: Presidential Address entitled "The Concept of Ownership in Australia and the Pacific," by Dr. A. Capell, M.A., Ph.D.

1949—

March 17th.—"The Australian-American Arnhem Land Expedition." An illustrated account of the expedition in the field and of the archæological discoveries made by the lecturer, Mr. F. D. McCarthy, Dip.Anthr.

May 18th.—"The People of the Markham Valley," by Dr. K. E. Read.

September 27th.—"The Anthropologist as a Social Engineer," by Miss Jean Craig, M.A. A summary of the new fields of research now opened to the anthropologist in the United States.

Nine Council meetings were held during the year. The death of Mr. Watkins and the resignation of Mr. N. Warren Waterhouse caused two vacancies in Council, which were filled by Dr. Neil Macintosh and Mr. Carlyle Greenwell.

Two numbers of the Society's journal MANKIND were published, Vol. IV, No. 2, in May and Vol. IV, No. 3 in September. Interest in the journal is expanding, and our interstate and overseas subscribers now total 34 and we exchange with a further 27 institutions. We are still unable to meet the demand for complete sets, as the cost of reprinting our out-of-stock back numbers is too high. In fact the steep rise of printing costs of MANKIND over the past twelve months has been such that we are able to maintain our standard of publication and the low selling price of the journal only with the help of the N.S.W. Government grant.

In January of this year a conference of the Australian and New Zealand Association for the Advancement of Science was held in Hobart. Professor A. P. Elkin and Mr. F. D. McCarthy were the Society's delegates to the conference and to the biennial meeting of the Australian Anthropological Association held at the same time. At this latter meeting the Anthropological Society of Queensland was admitted as an affiliated member of the Association. The question of seeking permission to affix the tital Royal to the designation of the Association, a motion submitted by the N.S.W. Society, was discussed. It was resolved that the matter be referred back to the State Societies for consideration. Council hopes to reach some finality with the State Societies on this question shortly.

During the year Council submitted a draft bill for the protection and preservation of Aboriginal relics to the Premier of N.S.W., through the courtesy of the Hon. E. G. Wright, M.L.C., a member of the Society. It is now under consideration by the Premier, and Council is hopeful that the preservation of these nationally important relics will be secured by appropriate legislation.

Representations made by Council to the Minister for Lands were successful in securing as a reserve an area of five acres in the Arcadia district, on which are many valuable groups of Aboriginal rock engravings.

Owing to ill health, Mr. E. A. Holden resigned his position as Honorary Auditor, and Council wishes to place on record its thanks to Mr. Holden for his services.

The Society's prize of £2 2s. to the student producing the best essay in Anthropology III at the University of Sydney was renewed this year.

Council wishes to thank Professor Elkin for the use of his own and the Anthropology Department's rooms during the year.

Council is particularly pleased that the interest of members in the lecture programme during the current year has been maintained, the average attendance of members and guests at general meetings being 40. It regrets that its plans for a full programme were interrupted by industrial disturbances, but records its thanks to the lecturers for the fine addresses we were privileged to hear. For the coming year Council makes a special plea for new members. Interest in the science of anthropology is widening, and there must be many people to whom the privileges of membership of the Society would appeal. Surely a very fitting coming-of-age present would be at least 21 new members for 1950.

Australian Aboriginal Archæology and Material Culture. *Summary of a lecture delivered before the Society by Mr. F. D. McCarthy on 7th February*, 1950.

The lecturer gave a summary of present-day knowledge concerning the archæology and material culture of Australia, touching on the work that has been done in the past and what might be done in the future. He discussed the relative merits of the two approaches to archæology, that of the materialists and culture chronologists. In regard to the collecting of surface stone implements he stated that intensive collecting should be carried out in Queensland, Northern Territory and Western Australia to enable reasonably complete distributional maps to be compiled of our specialized types of stone implements about which a great deal was known in New South Wales, Victoria and South Australia. He summarized the two groups of Australian prehistoric cultures, the coastal Kartan, Gambieran, Bondaian and Eloueran, the inland group of Tartangan, Pre-Pirrian, Pirrian, Mudukian and Murundian, and the recently discovered Milingimbian and Oenpellian cultures of Arnhem Land. Where

possible a correlation was made between these cultures and material culture traits, such as rock paintings and carvings, stone arrangements, fish hooks and files. Mr. McCarthy then referred briefly to the succession of stone implement-making techniques in Australia, and their range, as compared with other parts of the world, in the time scale of prehistoric cultures. A brief review was then given of the external relationships between Australian stone implements and techniques and those of Oceania, Asia and Europe, a study now in its infancy but one which has interesting possibilities. A recent discovery mentioned was the use of cylindro-conical stones, identical with Australian types, as sago-pounders in Borneo.

It was from the point of view of the historical basis that the lecturer dealt with the material culture. He said that the ultimate aim of the ethnographer is to define the basic culture and to ascertain the sources, origin and number of extraneous traits added to it in Australia. He pointed out that although Australian material culture possesses such ancient survivals as knotted netting, coil and twined basketry, drill-method of fire-making, the spear as the principal weapon, reddening of the bones of the dead, and others, it lacked such outstanding culture advances as the bow and arrow, pottery, weaving, currency and cultivation. Nevertheless, it is a rich material culture for a nomadic people. Mr. McCarthy stated that the traits of a basic material culture, similar to that of the Tasmanians or of the south-west Australians, had undergone local variation sufficient to form definite local cultures in Australia, aided by local invention although this factor was not a very important one in Australia. To the Australian culture over sixty traits have been introduced from Melanesia, a dozen or more were introduced by the Indonesians into Arnhem Land, and a further small group filtered in on the north-west coast. These traits have been distributed widely by the extensive trading system which existed throughout the continent. The lecturer also referred to the improvement which takes place in Australia, from the relatively primitive local culture in south-east and south-west Australia to the more highly advanced local cultures of northern Australia.

The lecturer stated that it is clear that Australia has had a succession of archæo-ethnographical cultures, and that, since early in the occupational period a continuous stream of introduced traits has enriched Australian culture as a whole but more intensively in the northern portion. The Australian problem, therefore, is part of the wider Oceanic one, which in turn is an extension of cultural movements from south-east Asia. The stability of the economic life, the cultural traditions and the conservatism of the Australian aborigines are apparently not conducive to a change from a nomadic to an agricultural life. The lecture was illustrated with lantern slides.

Papers dealing with this subject by Mr. McCarthy are as follow :

" Trade in Aboriginal Australia, etc.," *Oceania*, IX, pp. 405-38 ; X, pp. 80-104, 171-95, maps 1-16.

" A Comparison of the Prehistory of Australia with that of Indo-China, the Malay Peninsula and Archipelago," *Proc. Third Congress of Prehistorians of Far East, Singapore*, 1938, pp. 30-50, pls. 1-xi.

" Aboriginal Australian Material Culture : Its Composition," MANKIND, II, 241-69, 294-320, Figs. 1-10.

" The Prehistoric Cultures of Australia," *Oceania*, XIX, 4, 1949, pp. 305-19, Figs. 1-2.

Annual Report of the Anthropological Society of Queensland, 1949. *Summary of the report delivered at the Annual Meeting of the Society, 20th October, 1949.*

The Council has pleasure in submitting to members the first Annual Report of the Society for the year ended 10th September, 1949.

Total membership now stands at 78, consisting of 66 Foundation Members and 12 new members who have joined during the year. Many of the members come from distant parts of the State, and it is apparent that the Society is well launched and well prepared to carry out the objects for which it was founded.

Seven general meetings were held in the Geology Theatre, University of Queensland during the year, at which the following lectures were delivered:

1948—

September 8th.—Inaugural Meeting: Presidential Address entitled "An Introduction to Anthropology, with Special Reference to the Origin and Status of the Australian Aborigines and Native Peoples of the Pacific," by Professor H. J. Wilkinson.

November 26th.—Inaugural Address entitled "Anthropology To-day," by Professor A. P. Elkin.

"Artefacts," by Mr. S. R. Mitchell.

1949—

"Exhibition of Water-colours by Aborigines from Hermansburg," by Mr. Wallert.

"Bentinck and Mornington Islanders," by J. B. McCarthy.

"Stone Implements of the Darling River Area," by Mr. Lindsay Black.

"Witchcraft and Symbolic Dances of New Guinea," by Dr. Wade.

A number of members have presented books to the Society as the nucleus of a library, and it is hoped that during the coming year their good example will be followed by other members.

Donations of specimens of native handicraft were transferred to the University of Queensland Ethnological Museum, which had already a substantial nucleus in the collection of Dr. L. P. Winterbotham.

During the year an interesting field trip was made by a number of members to inspect *bora* rings at Beaudesert and Rathdowney. Various other *bora* sites have been reported, registered and inspected and it is quite pleasing to record our appreciation to the Press for its efforts to arouse public interest in these and other evidences of the life and culture of the fast disappearing Australian Aborigine.

Appended herewith is a Statement of Receipts and Expenditure incurred by the Society up to the 10th September, 1949.

EXPENDITURE.	£	s.	d.	INCOME.	£	s.	d.
To Subscriptions to MANKIND ..	9	11	2	By Subscriptions	51	5	0
,, Advertising	1	8	2	,, Subscriptions in Advance	1	17	6
,, Professor Elkin's Visit	1	6	7	,, Donations	5	5	0
,, Purchase of Booklets		15	0	,, Sale of Booklets		11	0
,, Stationery	7	16	0	,, Exchange Received		4	6
,, Postage	6	10	0				
,, Exchange Paid		3	6				
,, Sundries		1	0				
,, Excess Income over Expenditure	31	11	7				
	£59	3	0		£59	3	0

REVIEWS

Die Bhil in Centralindien (Wiener Beitraege Zur Kulturgeschichte und Linguistik). Vol. VII. *By Wilhelm Koppers, F. Berger, Vienna,* 1948, *xx,* 352 *pp., sixteen plates, twenty text illustrations, five maps.*

The Bhil are a dark-skinned people of about one and a quarter million individuals, inhabiting a very large area in the north-west of Central India. Their anthropological position is still not clear and perhaps it is a good plan to adopt the reserved attitude of Bhupendranath Datta, who thinks that " what is needed is more accurate and systematic investigation and less speculation " about the " different biological types " existing in India.

The book here under review is the first comprehensive monograph on the cultural anthropology of the Bhil. It is the fruit of Prof. Kopper's one year's field work among the Bhil tribes, carried out in 1938-39 with the assistance of Rev. Leonhard Jungblut, a Dutch missionary, who possessed a good command of the vernacular. Professor Koppers was never content with the mere recording of an earlier report but made a special point of checking up practically every relevant detail in the light of his own findings. In this way he has definitely achieved his objective, viz. to present a handbook of Bhil ethnography. The very large and complex material is offered in the form of handy short chapters grouped in a number of principal sections. The order of these sections is rather arbitrary and at any rate unusual in that they begin with " Economics," followed by " Sociology," " Festivals and Performances," " Measures Taken Against Disease and Death " and " Funeral Rites." Then we find a chapter dealing with " the subordinate deities " and astral mythology, followed by a short collection of heterogeneous matters such as superstition, the evil eye, witches, good spirits, the soul ; and evil spirits. There is no summary of all these features under the heading " Religion " as one should expect. This is apparently because Prof. Koppers' monograph on Bhagwan, the Supreme Deity of the Bhils, is a separate publication (*Anthropos*, XXXV-XXXVI, pp. 264-325). However, we find a section on sacred animals and rivers and sacred and economically important plants. The author concludes his book with a collection of songs, all texts being given in phonetic transliteration with interlinear translation and, subsequently, a free translation. The songs are of a variety of types, some are religious, others secular ; a few are wedding songs. The last is an interesting magical song sung by a magician during treatment of snake bite.

Stimulating as Prof. Koppers' many suggestions and theories in this book may be, it is its wealth of observed facts and positive information that constitutes the importance of this volume in the first place. The sections dealing with the material culture deserve special mention. In the chapter on musical instruments there is a detailed description of the six different types of drums. One of these is the Dhak, the hour glass or biconical drum which is so well known from other areas. In Hindu terminology, it is called *damaru*, and Prof. Koppers tells us that, among the Bhils, this form of drum is associated with the magician, and its use is entirely ritual. The Bhil are worshippers of Kali-Durga, who is known under the name of *Bhowani*, whereas her consort, Siva, is not generally worshipped or even known. The biconical drum, however, is one of the attributes of Siva and Kali but here it appears regularly in its original form, viz. as a combination of two skull caps. Koppers' statement, then, that the biconical drum is either identical with, or related to the double-skull drum is certainly correct for India-Tibet. I am not satisfied, though, that, technologically, all the biconical drums found in other areas may be traced back to the skull prototype.

The learned author has undoubtedly succeeded in demonstrating that the bulk of the tribes now known as Bhil may well be regarded as the remnants of a primitive, i.e. pre-Aryan and, probably, non-Dravidian people. The ultimate solution of the problem of the origin of a people will be provided only by palæontology and physical anthropology, but where, as in the case of the Bhil, there have been many centuries of intermarriage with other races, the situation does not seem to be very hopeful. The safest method nowadays of tracing racial origins is probably blood group research, and this way seems to be barred here on account of miscegenation.

It is noteworthy that, in his book " Hindu Castes and Sects," Calcutta, 1896, Jogendra Nath Bhattacharya, a learned Brahman, briefly refers to the " Bheels," notably those of Khandesh, as one of " the criminal tribes of the Bombay Presidency," although he also admits that they are " an aboriginal tribe of Central India " (p. 566). This shows that, in the classification of the Hindus, the Bhils represent just another contingent of subdued tribes which, as a result of this form of assimilation, occupy a despised place at the bottom of the Hindu caste system. It is probable that, when blood group research is carried out among them, the B factor will be found represented.

LEONHARD ADAM.

The Coming of the Maori. *By Te Rangi Hiroa (Sir Peter Buck), Whitcombe and Tombs Ltd., Wellington,* 1949, *x,* 548 *pp.,* 24 *plates.* 30/- (*N.Z.*).

It is no idle claim to state that students of Maori culture are deeply indebted to the Government of New Zealand, through its Maori Purposes Fund Board, for sponsoring the publication of this volume. It is a magnificent piece of book making, both paper and printing being of high quality, illustrations lavish and index and bibliography adequate—and all for thirty shillings. One wonders what such a book would cost if published in England or the United States !

The author is too well known to readers of this journal to need introduction, but for the few who are ignorant of his reputation it is sufficient to say that he is the Director of the famous B. P. Bishop Museum and the greatest living authority on the material culture of Polynesia and the history and traditions of its people. When such a person decides to write a book about the native people of New Zealand, it is not unnatural to expect that the outcome will be a detailed account of the technological skill with which their forefathers adjusted themselves to their physical environment, together with an equally careful account of their discovery and settlement of the country along with an accurate and enthusiastic description of their mythology and magico-religious ideas, and so it is in the case of " The Coming of the Maori."

The keynote of the whole work is, I believe, expressed in the author's introductory statement, in which he says : " I have endeavoured throughout to supply the Polynesian background to Maori culture." It is precisely in this respect that so many writers of the past have failed in describing Maori culture. They have poured out their knowledge of native lore and material culture but have been unable to show their relationship to the main body of Polynesian culture. Only Peter Buck has succeeded because he alone has devoted a lifetime of study to this question of inter-Polynesian cultural relationships.

He frankly admits that " much space has been devoted in this work to material culture," and he gives his reasons for doing so. It would appear that the close attention which he pays and has always paid to " material objects which people of past generations have made with their hands " has an archæological basis, since he openly states that " in reconstructing the past, the best evidence is provided by such objects." To any reader of this review who is interested in a reconstruction of early Maori culture and its Polynesian affinities per medium of the material culture of these people, this book is without peer. It is the best and most authoritative guide available.

Likewise, to any reader who wishes to learn something of the inner meaning of Maori mythology and religion this book can be wholeheartedly recommended. However, when we come to such aspects of Maori culture as social organization, warfare, economics, the life cycle of the individual, kinship and other such facets of a culture which give it life and brilliance, this book is not an adequate guide. Perhaps it is unfair to criticize the work as a general ethnological treatise on the Maori, but since it has been put forward as a text book for students of anthropology in the University of Otago, it is only just to point out that it is an unbalanced piece of ethnological scholarship and by no means represents the long-awaited standard work on the general anthropology of the New Zealand Maori. This still remains to be written.

F. L. S. Bell.

The Moa-Hunter Period of Maori Culture. *By Roger Duff, M.A. Canterbury Museum Bulletin, No. 1. Department of Internal Affairs, Wellington,* 1950. *XX,* 480 *pp.,* 60 *figs., plates.*

Many attempts have been made to solve the problem of Polynesian culture origins. This book represents another such attempt. It is based on a series of important archæological discoveries made in the South Island of New Zealand within the last decade.

As a result of excavations made on the site of an early Maori burial ground, necklaces of *moa* bone, argillite adzes, whale's tooth ornaments, carved serpentine pectoral amulets, minnow shanks and fish hooks were recovered in comparatively large quantities. These artefacts are of so distinctive a character as to mark off the people who used and made them as culturally different from other Polynesian inhabitants of New Zealand. At the same time, a comparison of these objects, particularly the adzes, with similar objects found in other marginal islands of eastern Polynesia, proves that they belong to a very early Polynesian culture type.

Among the more important conclusions drawn by the author are that " in so far as we can isolate it at all, the earliest Polynesian culture has left strongest traces around the marginal islands " and " the Moa-hunter culture is apparently New Zealand's first culture " . . . " The Moa-hunter migration to New Zealand from the Society Islands took place so soon after the first Polynesian landfall in those islands, and travelled so far off the beaten track of the general Hawaiki migrations, that it succeeded in retaining items of culture pre-dating the original hiving off of the Eastern and Western Polynesians " . . . " The assumption of age (of the Moa-hunter culture) rests largely on the interpretation of traditional references to the date of extinction of the *moa.*"

The scholarly care with which the author has assembled his material and laid bare the bases of his conclusions is to be highly commended. The whole work is a model piece of

archæological reporting and by far the best introduction to the prehistory of southern Polynesia.

The Historical Branch of the Department of Internal Affairs of the Government of New Zealand is to be congratulated in sponsoring the publication in such comparatively lavish form of a piece of fundamental research which, if left to the discretion of the commercial world of publishing, would never have been made available. It is well illustrated, well documented, adequately indexed and altogether an excellent production. Unfortunately there is no indication on the book or its slip cover as to its price—a serious bibliographic omission !

F. L. S. Bell.

CORRESPONDENCE, NOTES AND NEWS :

Early Man in Australia : Comments by Dr. Leakey.

When submitting his article on " The Age of *Homo Sapiens*," Dr. Leakey wrote the following letter, which the Editor reproduces below in the belief that its contents will be of interest to our readers.

" I now enclose my paper on ' The Age of *Homo Sapiens*,' which, as you will see, discusses among other things the evidence suggested by the Australian and Tasmanian aborigines. Many anatomists are in the habit of regarding the aborigines as representing the most ' primitive ' race of *Homo sapiens*. Personally I regard them not as the most ' primitive,' but as one of the most specialized races.

" If my paper will do anything to stimulate your anatomists to re-examine their views on the aborigines, to see whether they cannot find other indications of their being specialized rather than ' primitive ' ; and further, if my paper stimulates both scientists and amateurs to a more intensive attempt to seek for early Stone Age cultures (as distinct from the relatively recent surface finds that can be attributed to the aborigines in the last 10,000 years) I shall have achieved my purpose.

" As you probably know, for very many years there was a tendency in the Union of South Africa to lump all Stone Age finds together as the work of the Bushmen and Hottentots.

" Even in relatively recent years there have been scientists in South Africa who (because they mainly studied surface finds) maintained that it was impossible to separate the artefacts of such recent cultures as the Wilton and Smithfield from the hand axe cultures.

" But scientific investigation has of course shown that this is not true, and that South Africa, like my own country of Kenya, has in fact a whole series of stratigraphically dated Stone Age cultures, which give the lie to the conclusions drawn from surface finds. I have felt for very many years that there must be in Australia a clearly defined series of evolutionary stages of culture which could be dated relative to our other stratigraphical evidence, and I still hold this view.

" I must admit that during the last ten years, I have been out of touch with discoveries in Australia, and it may be that such discoveries have already been made. If so, I should welcome references to publications in which they have been described, as I hope shortly to bring out a new edition of ' Adam's Ancestors.' If such discoveries have not yet been made, my hope is that my brief paper may stimulate a more exacting search for evidence, which I feel sure is there."

The Anthropological Society of Victoria

(Founded 1932)

OFFICE-BEARERS, 1949-1950.

President: Mr. C. A. S. Mansbridge, B.A., F.R.G.S.

Vice-Presidents: Mr. H. R. Balfour, Mr. G. N. Hyam.

Committee:
Dr. Alan Griffiths, M.B., B.S., Col. Neil McArthur, E.D., J.P., Mr. S. R. Mitchell, M.Aust., I.M.M., Rev. D. Rettick, Mr. H. C. Stewart, Mr. J. A. Thompson, M.Sc., B.D., Mr. G. White.

Hon. Secretary: Mr. R. C. Seeger, 56 Jenkins St., Northcote, N.16.

Hon. Treasurer: Miss L. Young, 13 Chastleton Ave., Toorak, S.E.2.

Hon. Librarian: Miss S. M. Seeger.

Hon. Auditor: Mr. E. E. Lord.

Meetings are held in the Anatomy Lecture Theatre (rear entrance), University of Melbourne on Wednesday evenings as advertised, at 8 p.m., at regular intervals. Annual subscription (including free supply of MANKIND), 10/-.

The Anthropological Society of Queensland

(Founded 1948)

OFFICE-BEARERS, 1949-1950.

President: Professor H. J. Wilkinson.

Vice-President: Associate Professor F. Robinson.

Council:
Dr. L. P. Winterbotham, M.B., B.S. (Melb.), Mr. G. Mack.

Hon. Treasurer: Mr. J. W. Johnstone.

Hon. Secretary: Mr. F. S. Colliver, c/o Geology Department, University of Queensland.

The Australian Anthropological Association

Members:
Anthropological Society of New South Wales.
Anthropological Society of South Australia.
Anthropological Society of Victoria.
Anthropological Society of Queensland

OFFICE-BEARERS, 1950-1951.

President: Professor H. J. Wilkinson.

Hon. Secretary: Mr. F. S. Colliver, c.o. Geology Dept., University of Queensland, Brisbane, Q

Hon. Treasurer: Mr. J. W. Johnstone.

OBJECTS.

(*a*) To promote the science of Anthropology.
(*b*) To hold biennial conferences of delegates from affiliated societies to deal with matters affecting affiliated societies generally, or the science of anthropology.
(*c*) To take public and official action in the interests of anthropology, as may be deemed desirable.
(*d*) To encourage affiliated societies to co-operate in every possible way.

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All communications, MSS., and proposed advertisements to be addressed to Mr. F. L. S. Bell, M.A., Editor, City of Sydney Public Library, George Street, Sydney.

Persons interested in the work of the Society please address correspondence to the Hon. Secretary.